

CODE ANALYSIS

APPLICABLE CODES			
Year		Year	
International Building Code	2006	National Electrical Code	2005
International Mechanical Code	2006	Uniform Code for	
International Plumbing Code	2006	Building Conservation	
International Fire Code	2006	ADA Accessibility	
International Energy		Guidelines	
Conservation Code	2006		

A. Occupancy and Group: EXISTING NATIONAL GUARD ARMORY

Change in Use: Yes _____ No X Mixed Occupancy: Yes _____ No X

Special Use and Occupancy (e.g. High Rise, Covered Mall): N.G. ARMORY

B. Seismic Design Category: D Design Wind Speed: 90 mph

C. Type of Construction (circle one):

 I I II II III III IV V V

 A B A B A B HT A B

D. Fire Resistance Rating Requirements for the Exterior Walls based on the fire separation distance (in hours): EXISTING BLOCK AND FACE BRICK

North: _____ South: _____ East: _____ West: _____

E. Mixed Occupancies: N/A Nonseparated Uses:

F: Sprinklers:

 Required: N0 Provided: N0 Type of Sprinkler System: _____

G: Number of Stories: 2 Building Height: 25'

H: Actual Area per Floor (square feet): 23,725 SF LOWER, 7,715 SF UPPER FLOOR

I: Tabular Area: N/A

J: Area Modifications: NONE

a) $A_a = A_t + \left[\frac{A_t I_f}{100} \right] + \left[\frac{A_t I_s}{100} \right]$ $I_f = 100 \left[\frac{F}{P} - 0.25 \right] \frac{W}{30}$

b) Sum of the Ratio Calculations for Mixed Occupancies:

$\frac{\text{Actual Area}}{\text{Allowable Area}} \leq 1$

c) Total Allowable Area for:

 1) One Story:

 2) Two Story: A_a (2)

 3) Three Story: A_a (3)

d) Unlimited Area Building: Yes No Code Section:

Element	Hours	Assembly Listing	Element	Hours	Assembly Listing
Exterior Bearing Walls			Floors - Ceiling Floors		
Interior Bearing Walls			Roofs - Ceiling Roofs		
Exterior Non-Bearing Walls			Exterior Doors and Windows		
Structural Frame			Shaft Enclosures		
Partitions - Permanent			Fire Walls		
Fire Barriers			Fire Partitions		
			Smoke Partitions		

L. Design Occupant Load: EXISTING

Exit Width Required: N/A Exit Width Provided: N/A

M. Minimum Number of Required Plumbing Facilities: EXISTING

a) Water Closets - Required (m) _____ (f) _____ Provided (m) _____ (f) _____

b) Lavatories - Required (m) _____ (f) _____ Provided (m) _____ (f) _____

c) Bath Tubs or Showers: _____

d) Drinking Fountains: _____ Service Sinks: _____

FOOTNOTES:

1) In case of conflict with the U.S. Department of Justice Federal Registers Parts I through V - ADA Guidelines and specific reference to the International Building Code Accessibility Chapters, the more restrictive requirement shall govern.

2) Additional Code Information shall be provided at the discretion of the Building Official for Complex Buildings. Including, but not limited to:

a) High Rise Requirements.

b) Atriums.

c) Performance Based Criteria.

d) Means or Egress Analysis.

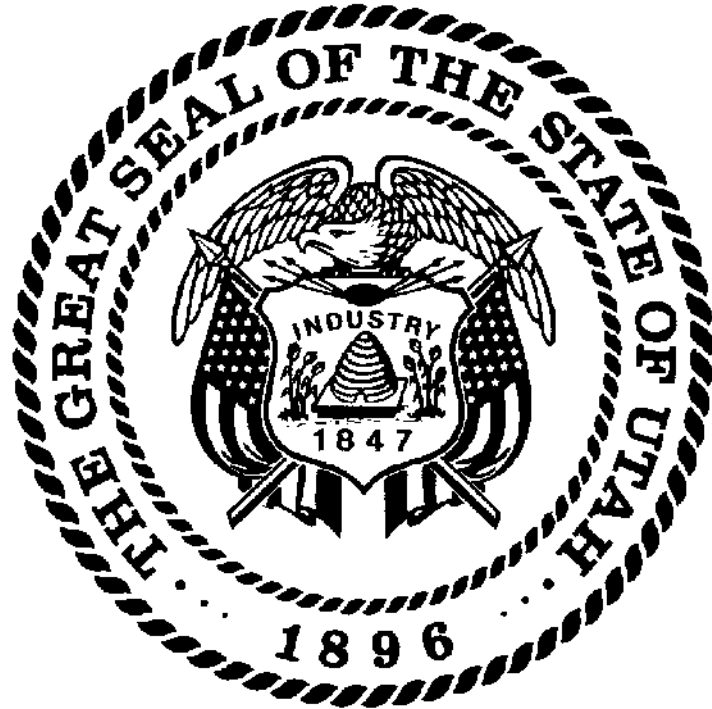
e) Fire Assembly Locator Sheet.

f) Exterior and Interior Accessibility Route.

g) Fire Stopping, Including Tested Design Number.

THIS PROJECT INCLUDES THE ADDITION OF ROOFTOP HEATING AND COOLING UNITS, AND SPLIT SYSTEM HEAT PUMPS. SCOPE ALSO INCLUDES THE STRUCTURAL SUPPORTS FOR THE NEW ROOFTOP UNITS.

OGDEN ARMORY
HVAC REPLACEMENT
DFCM # 07181470



State of Utah—Department of Administrative Services

DIVISION OF FACILITIES CONSTRUCTION
AND MANAGEMENT

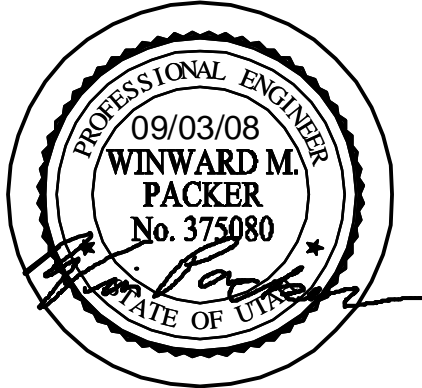
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DRAWING INDEX:

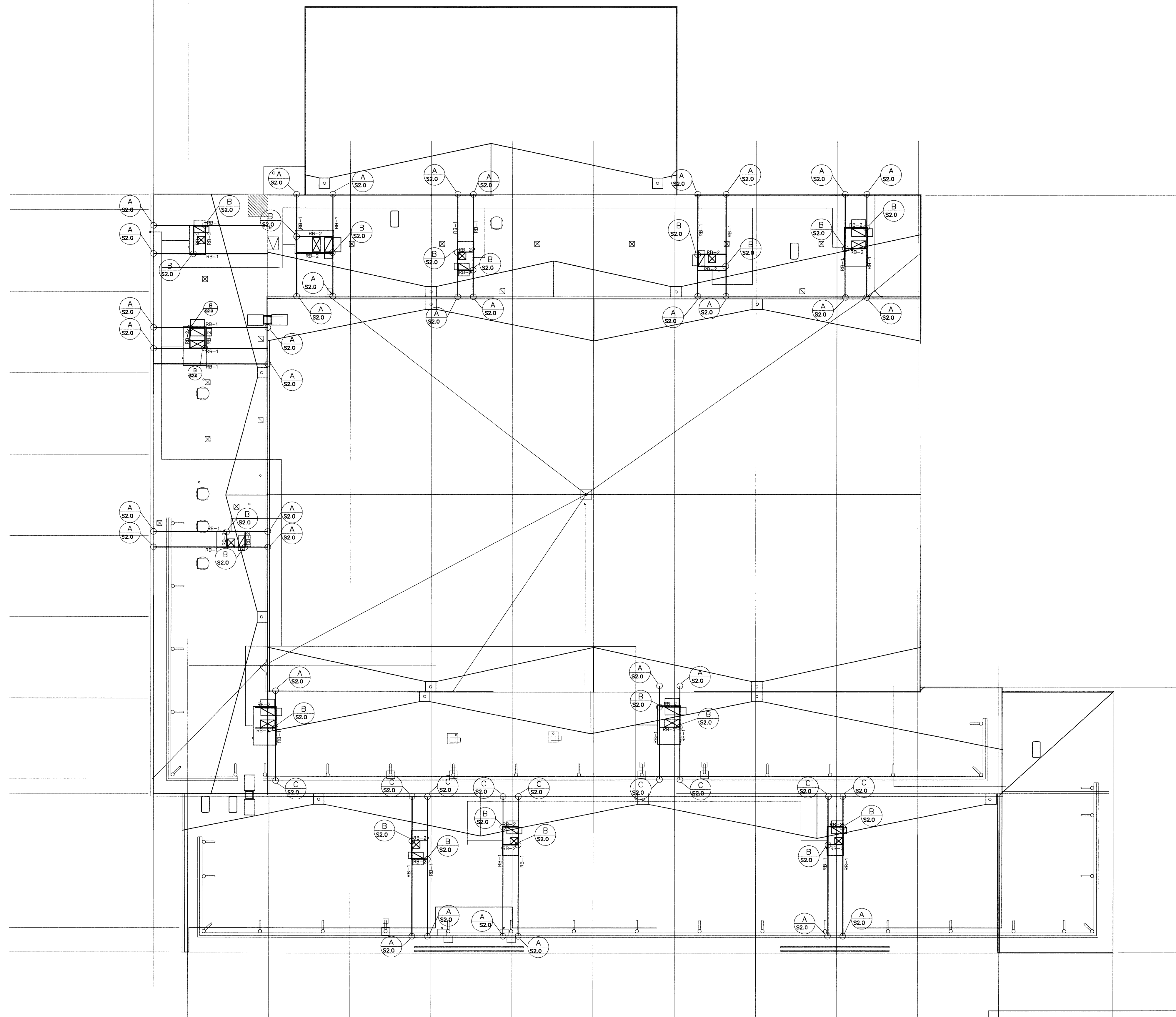
- M000- TITLE SHEET
- S1.0- ROOF FRAMING PLAN
- S2.0- GENERAL NOTES & DETAILS
- M001- MECHANICAL LEGEND AND GENERAL NOTES
- MD101- MECHANICAL DEMOLITION BASEMENT
- MD102- MECHANICAL DEMOLITION FIRST FLOOR
- MD103- MECHANICAL DEMOLITION SECOND FLOOR
- MD104- MECHANICAL DEMOLITION ROOF
- ME101- MECHANICAL BASEMENT
- ME102- MECHANICAL FIRST FLOOR
- ME103- MECHANICAL SECOND FLOOR
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- ME501- MECHANICAL DETAILS
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- ME601- MECHANICAL SCHEDULES
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- EG101- SYMBOLS, SCHEDULES AND NOTES
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- EP101- POWER PLAN FIRST FLOOR
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- EP301- ELECTRICAL ROOF PLAN
- EX101- ONE-LINE DIAGRAM AND PANELBOARD SCHEDULES
- EX301- ELECTRICAL DIAGRAMS



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WHW ENGINEERING, INC.
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ROOF FRAMING PLAN
SCALE: 3/32"=1'-0"

BEAM SCHEDULE		
MARK	SIZE	NOTES
RB-1	(3)1-3/4" x 11-7/8" LVL	
RB-2	(2)1-3/4" x 11-7/8" LVL	

DATE
8/7/2008

D. George Hansen, Inc.
RJI Engineering, Inc.

PROJECT
Ogden Armory

OCODEN, UTAH

ENGINEER
Eric George Hansen
STATE OF UTAH
4-9-08

4993-2282

DRAWN BY:
WJS

CHECKED BY:
DGH

PROJECT NUMBER
-

FILE NUMBER
-

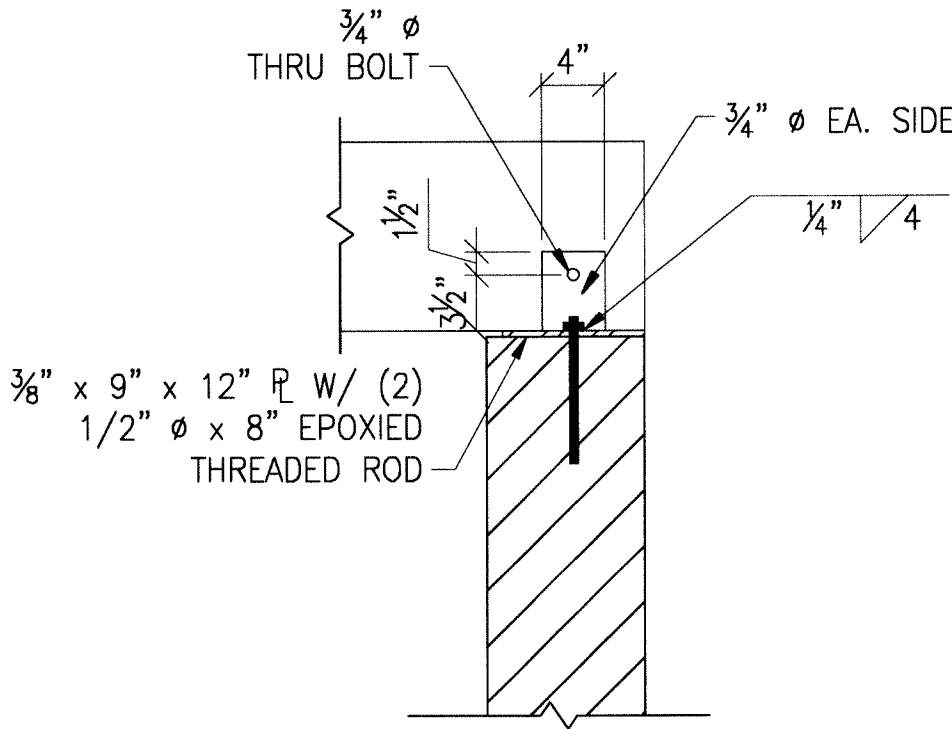
SHEET NO.
S1.0

GENERAL

1. VISITS TO THE JOB SITE BY REPRESENTATIVES OF THE ENGINEER DO NOT CONSTITUTE APPROVAL OF THE WORK PERFORMED BY THE CONTRACTOR OR HIS SUBCONTRACTORS AND ARE MERELY FOR THE PURPOSE OF OBSERVING THE WORK PERFORMED.
2. CONTRACTOR SHALL NOTIFY ENGINEER/ARCHITECT OF ANY DISCREPANCIES, OMISSIONS OR CONFLICTS BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND/OR SPECIFICATIONS BEFORE PROCEEDING WITH ANY WORK INVOLVED. IN ALL CASES, UNLESS OTHERWISE DIRECTED, THE MOST STRINGENT REQUIREMENTS SHALL GOVERN AND BE PERFORMED.
3. CONTRACTOR SHALL VERIFY ALL CONDITIONS, DIMENSIONS AND ELEVATIONS, ETC., AT THE SITE AND SHALL COORDINATE WORK PERFORMED BY ALL TRADES. DO NOT SCALE DRAWINGS.
4. SHOP DRAWINGS SHALL BE REVIEWED BY THE ENGINEER/ARCHITECT PRIOR TO FABRICATION OR ERECTION FOR ANY PREFABRICATED OR MANUFACTURER-DESIGNED COMPONENTS AND SHALL BE STAMPED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE WHERE THIS STRUCTURE RESIDES.
5. SIZES, LOCATIONS, LOADS, AND ANCHORAGES OF EQUIPMENT SHALL BE VERIFIED IN THE FIELD WITH EQUIPMENT MANUFACTURERS (SUPPLIERS) PRIOR TO FABRICATION OR INSTALLATION OF SUPPORTING STRUCTURES.
6. TEMPORARY BRACING SHALL BE PROVIDED WHEREVER NECESSARY TO TAKE CARE OF ALL LOADS TO WHICH THE STRUCTURE MAY BE SUBJECTED, INCLUDING WIND. SUCH BRACING SHALL BE LEFT IN PLACE AS LONG AS MAY BE REQUIRED FOR SAFETY, OR UNTIL ALL THE STRUCTURAL ELEMENTS ARE COMPLETE.
7. DURING AND AFTER CONSTRUCTION THE CONTRACTOR AND/OR OWNER SHALL KEEP LOADS ON THE STRUCTURE WITHIN THE LIMITS OF THE DESIGN LOAD.
8. CONTRACTOR AND ALL SUBCONTRACTORS SHALL PERFORM THEIR TRADES AND DUTIES IN A MANNER CONFORMING TO THE PROCEDURES AND REQUIREMENTS AS STATED IN THE 2006 INTERNATIONAL BUILDING CODE, (OR LATEST ACCEPTED CODE ADOPTED BY THE LOCAL BUILDING OFFICIALS.
9. ANY SPECIAL INSPECTION REQUIRED BY THE BUILDING OFFICIAL OR THE UNIFORM BUILDING CODE ARE THE RESPONSIBILITY OF THE OWNER OR CONTRACTOR.
10. CONTRACTOR SHALL BE RESPONSIBLE FOR SAFETY AND PROTECTION WITHIN AND ADJACENT TO THE JOB SITE.

LUMBER

1. MEMBER GRADES SHALL BE AS FOLLOWS;
- GLULAM BEAMS, (Simple Span)..... 24F-V4 DFDF
(Cantilevered)..... 24F-V8 DFDF
- JOISTS..... DOUG FIR #2 BTR
- HEADERS..... DOUG FIR #2 BTR
- POST..... DOUG FIR #1 BTR
- STUDS NON-BEARING WALLS..... DOUG FIR #2 BTR
- INTERIOR..... DOUG FIR STUD GRADE BTR
- STUDS BEARING WALLS..... DOUG FIR #2 BTR
- PRE-FAB TRUSSES/JOISTS..... AS PER MANUFACTURER
- SILL PLATES IN CONTACT W/CONCRETE..... DOUG FIR #2 BTR
(PRESSURE TREATED FOR MOISTURE PROTECTION)
2. WHERE NOT NOTED OTHERWISE, CONNECT ALL WOOD TO CONCRETE, WOOD TO STEEL, AND WOOD TO WOOD (EXCEPT STUD TO PLATE) WITH SIMPSON METAL CONNECTORS.
3. ALL MULTIPLE PLATES AND LEDGERS SHALL BE NAILED TOGETHER WITH 16d NAILS AT 8 IN. ON CENTER.
4. STUD WALLS SHALL RUN CONTINUOUS BETWEEN POINTS OF HORIZONTAL SUPPORT. PROVIDE BRACING WHERE OTHERWISE.
5. BLOCK ALL HORIZONTAL EDGES OF PLYWOOD WALL SHEATHING WITH 2 IN. NOMINAL BLOCKING. BLOCK EDGES OF PLYWOOD ON FLOORS AND ROOF AS DIRECTED ON DRAWINGS.
6. SOLID 2 IN. NOMINAL BLOCKING SHALL BE PROVIDED AT ENDS OR POINTS OF SUPPORT OF ALL WOOD JOISTS AND TRUSSES. CROSS BRIDGING OF NOT LESS THAN 1 IN. X 3 IN. MATERIAL SHALL BE PLACED IN ROWS BETWEEN SUPPORT POINTS, NOT TO EXCEED 8 FT APART, FOR SPANS OF 14 FT AND GREATER.
7. ALL LEDGER BOLTS SHALL HAVE PLATE WASHERS WITH A MIN DIA EQUAL TO 3 TIMES THE BOLT DIA UNLESS SHOWN OTHERWISE IN DETAILS.
8. MIN NAILING SHALL BE AS PER 25-Q UNIFORM BUILDING CODE. SEE ATTACHED SCHEDULE.
9. FASTENERS SUCH AS STAPLES, CAN ONLY BE SUBSTITUTED FOR NAILS AT A RATE EQUAL TO LOAD VALUES PROVIDED BY I.C.B.O. APPROVAL. SEE ATTACHED SCHEDULE.
10. TRUSSES SHALL HAVE BRIDGING & BLOCKING AS RECOMMENDED BY THE MANUFACTURER. MANUFACTURER SHALL SUPPLY AND CONTRACTOR SHALL INSTALL.



BEAM BEARING @ INT. WALL

SCALE: 1"=1'-0"

C

S2.0

DESIGN CRITERIA

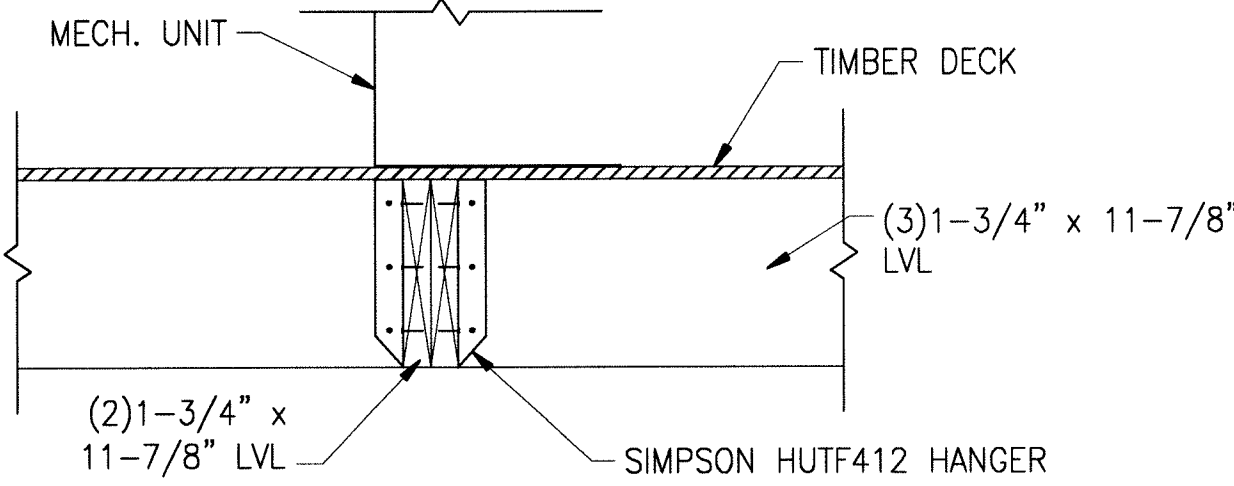
GOVERNING CODE	2006 IBC
SEISMIC	Ie = 1.00
	S.D.C. = D
	Sds = 0.62
	Sdi = 0.27
	Fa = 1.332
	Fv = 1.998
DESIGN WIND SPEED	90mph (3 sec. GUST)
MECH UNIT LOAD	350 LBS

REQUIRED SPECIAL INSPECTION

1. EPOXY BOLTS

SPECIAL INSPECTION SHALL BE PERFORMED BY PERSONEL CERTIFIED BY THE CITY OF OGDEN, UTAH FOR THE MATERIAL OR CONSTRUCTION BEING INSPECTED.

SPECIAL INSPECTIONS ARE SEPARATE FROM THE ENGINEER'S SCOPE OF WORK IN THIS CONTRACT.

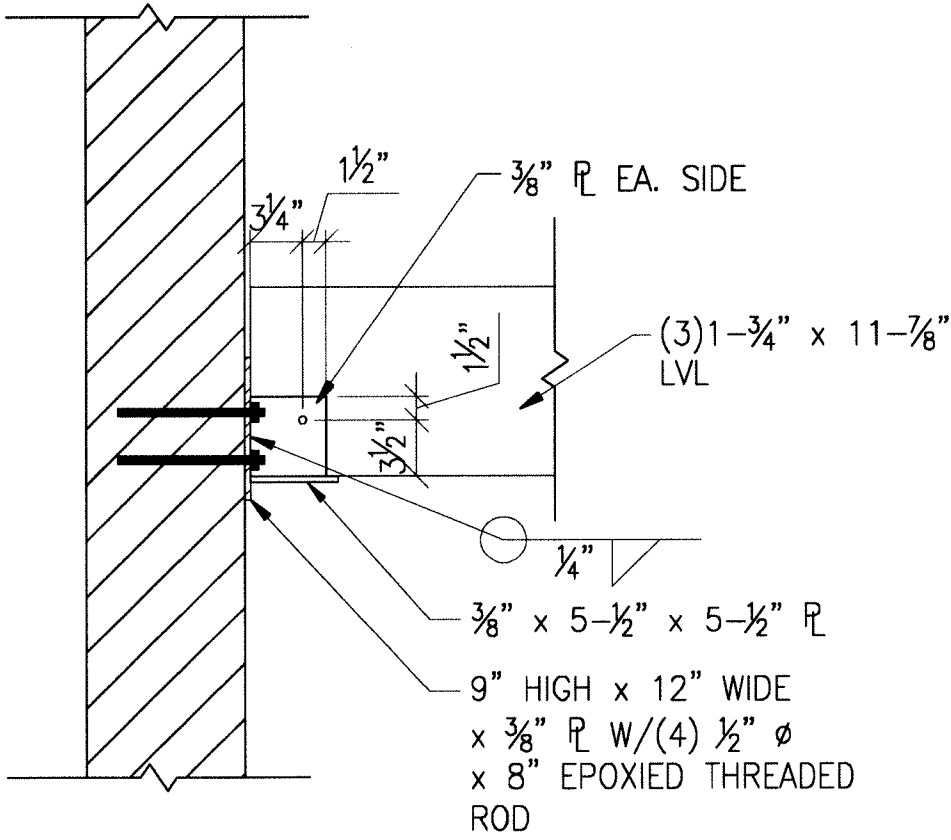


HEADER TO BEAM

SCALE: 1"=1'-0"

B

S2.0



BEAM BEARING @ EXTERIOR WALL
& HIGH ASSEMBLY ROOM WALL

SCALE: 1"=1'-0"

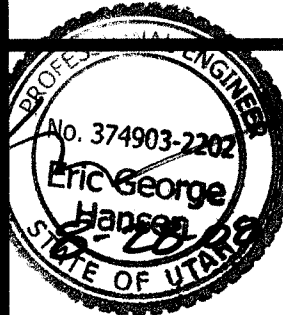
A

S2.0

DATE
8/7/2008

D. George Hansen, Inc.
K-1 Engineering, Inc.

PROJECT
Ogden Armory
625 E. 5300 So.
OGDEN, UTAH 84401



SHEET TITLE
GENERAL NOTES &
DETAILS

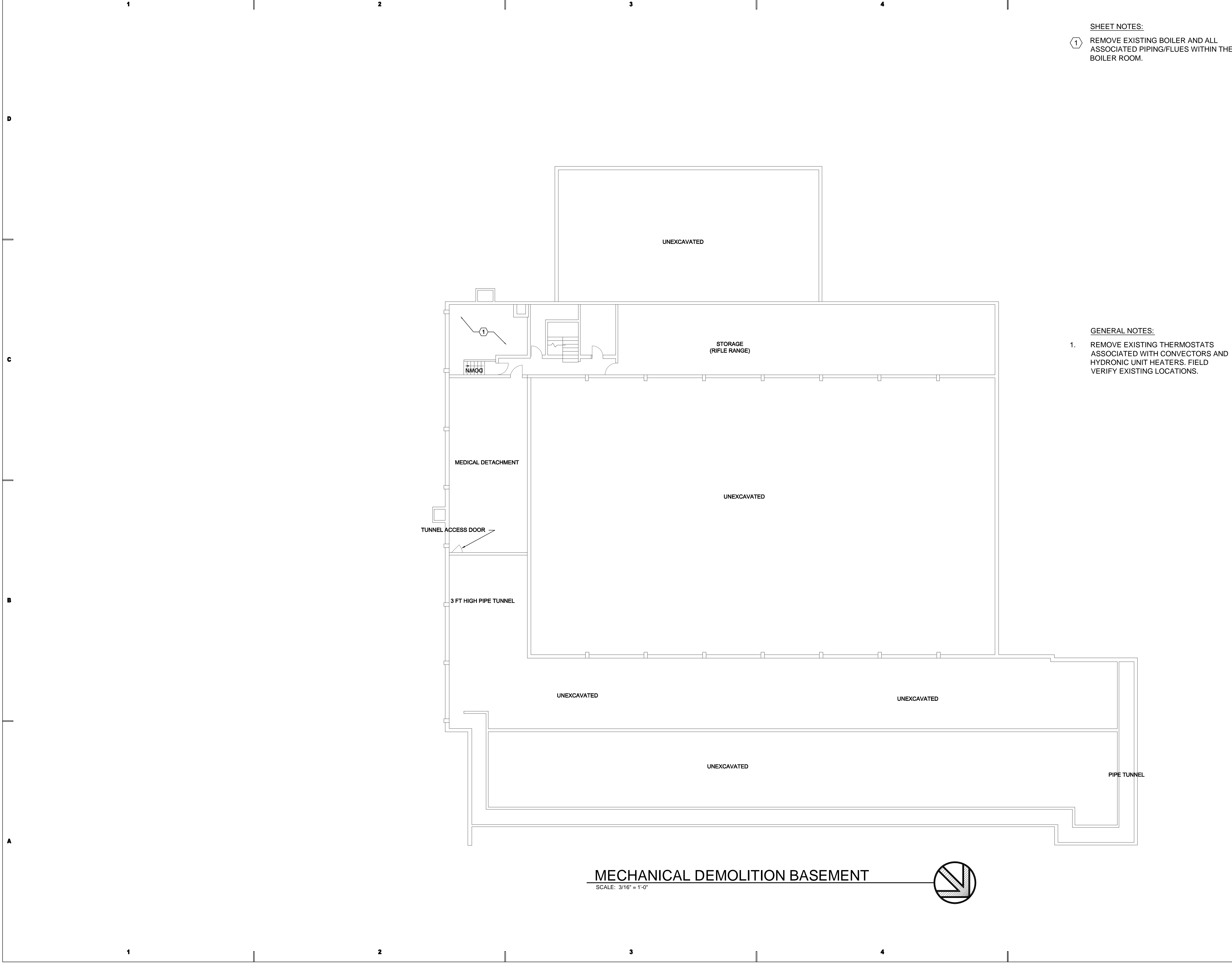
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CHECKED BY: DGH

PROJECT NUMBER
1

FILE NUMBER
1

SHEET NO.

S2.0



SHEET NOTES:

1. REMOVE EXISTING BOILER AND ALL ASSOCIATED PIPING/FLUES WITHIN THE BOILER ROOM.

GENERAL NOTES:

1. REMOVE EXISTING THERMOSTATS ASSOCIATED WITH CONVECTORS AND HYDRONIC UNIT HEATERS. FIELD VERIFY EXISTING LOCATIONS.

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EMAIL: excellence@whw-engineering.com

PROJECT NAME & ADDRESS

**OGDEN ARMORY
HVAC REPLACEMENT**

DFCM No. 07181470

Ogden, Utah

MARK	DATE	REVISION

PROJECT MANAGER:

PC

DRAWN BY:

STAFF

CHECKED BY:

WP

DATE:

JULY 21, 2008

WHW JOB NO.:

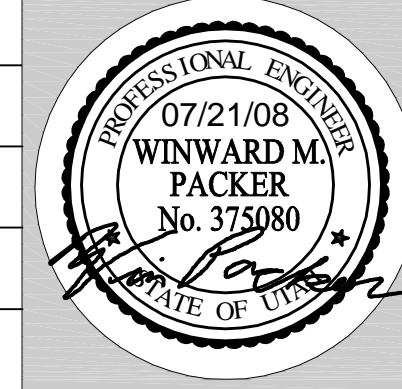
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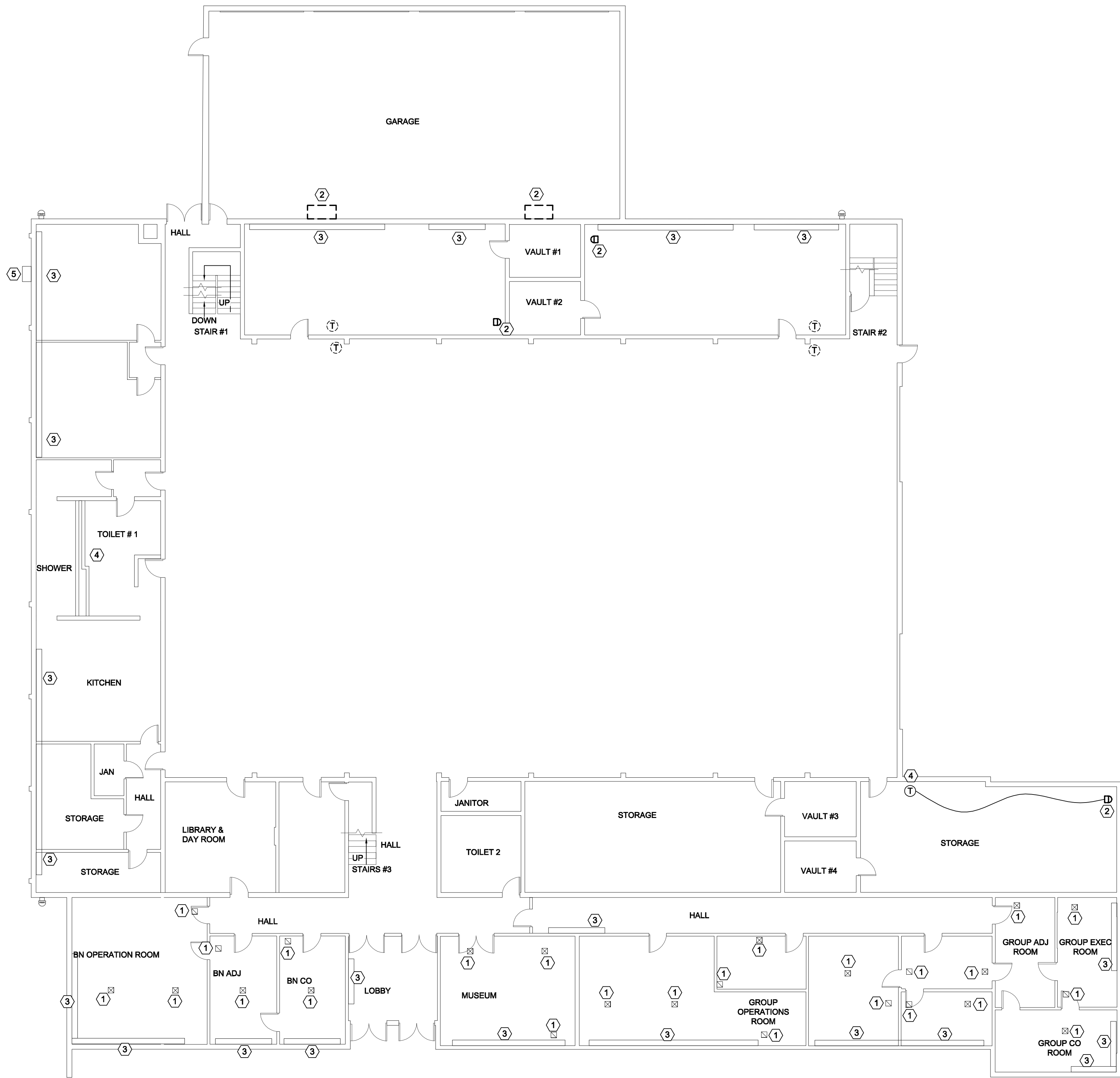
SHEET TITLE

**MECHANICAL DEMOLITION
BASEMENT**

SHEET NO.

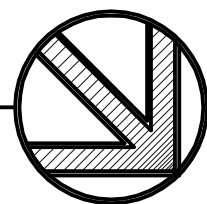
MD101





MECHANICAL DEMOLITION FIRST FLOOR

SCALE: 3/16" = 1'-0"



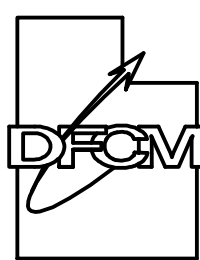
SHEET NOTES:

- EXISTING DIFFUSERS AND GRILLES TO REMAIN.
- REMOVE EXISTING HYDRONIC UNIT HEATER, AND ASSOCIATED CONTROLS.
- EXISTING CONVECTORS AND ASSOCIATED PIPING TO REMAIN IN PLACE.
- EXISTING EXHAUST TO REMAIN.
- EXISTING GAS METER.

GENERAL NOTES:

- REMOVE EXISTING THERMOSTATS ASSOCIATED WITH CONVECTORS AND HYDRONIC UNIT HEATERS. FIELD VERIFY EXISTING LOCATIONS.

State of Utah Department of Administrative Services



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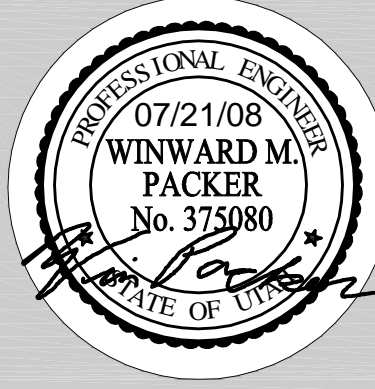
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SHEET TITLE

**MECHANICAL DEMOLITION
FIRST FLOOR**

SHEET NO.

MD102

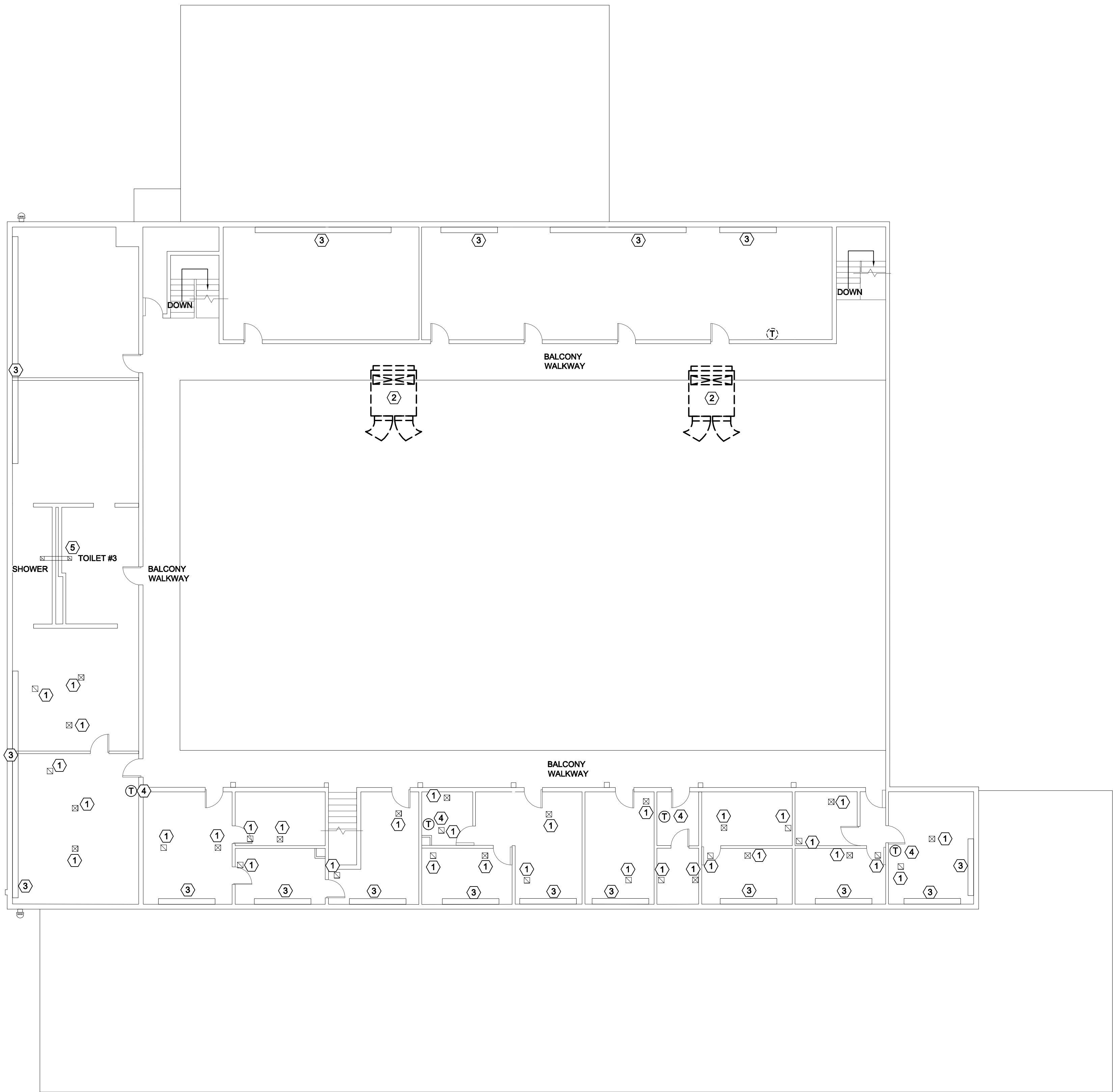


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C

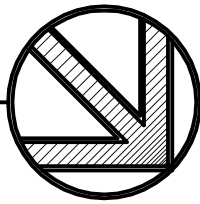
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A



MECHANICAL DEMOLITION SECOND FLOOR

SCALE: 3/16" = 1'-0"



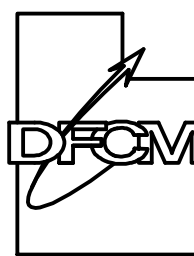
SHEET NOTES:

- EXISTING DIFFUSERS AND GRILLES TO REMAIN.
- DEMO EXISTING MAKE-UP AIR UNIT.
- EXISTING CONVECTORS TO REMAIN IN PLACE.
- EXISTING THERMOSTAT TO REMAIN.
- EXISTING EXHAUST TO REMAIN.

GENERAL NOTES:

- REMOVE EXISTING THERMOSTATS ASSOCIATED WITH CONVECTORS AND HYDRONIC UNIT HEATERS. FIELD VERIFY EXISTING LOCATIONS.

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Department of Administrative Services



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PROJECT NAME & ADDRESS

**OGDEN ARMORY
HVAC REPLACEMENT**

DFCM No. 07181470

Ogden, Utah

MARK	DATE	REVISION

PROJECT MANAGER:

PC

DRAWN BY:

STAFF

CHECKED BY:

WP

DATE:

JULY 21, 2008

WHW JOB NO.:

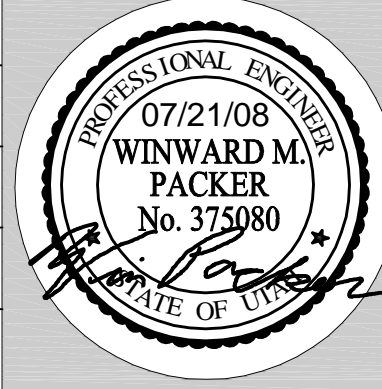
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SHEET TITLE

**MECHANICAL DEMOLITION
SECOND FLOOR**

SHEET NO.

MD103



1

2

3

4

D

C

B

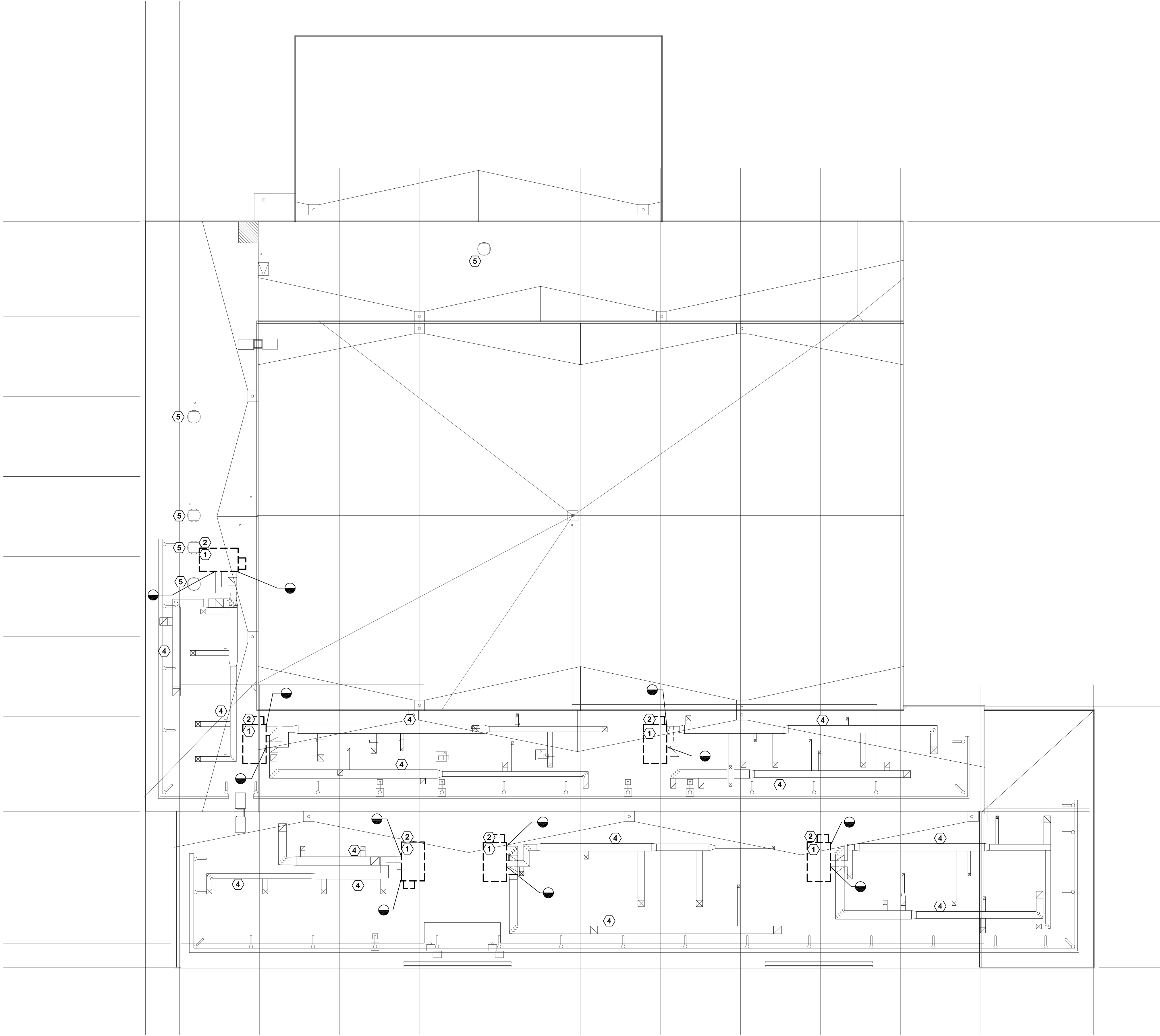
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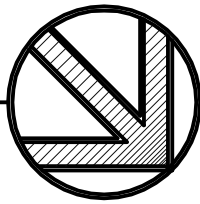
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4



MECHANICAL DEMOLITION ROOF

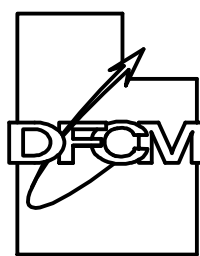
SCALE: 3/16" = 1'-0"



SHEET NOTES:

- 1 DEMO EXISTING COOLING ONLY RTU. SALVAGE TO OWNER.
- 2 EXISTING RTU CURB TO REMAIN.
- 3 NOT USED.
- 4 EXISTING DUCTWORK TO REMAIN.
- 5 EXISTING EXHAUST FAN TO REMAIN.

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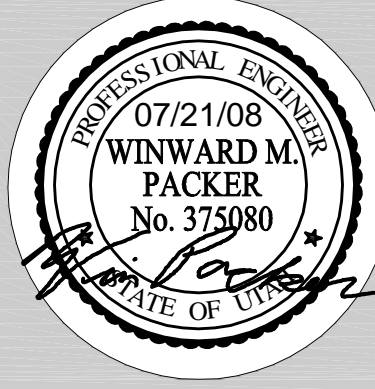
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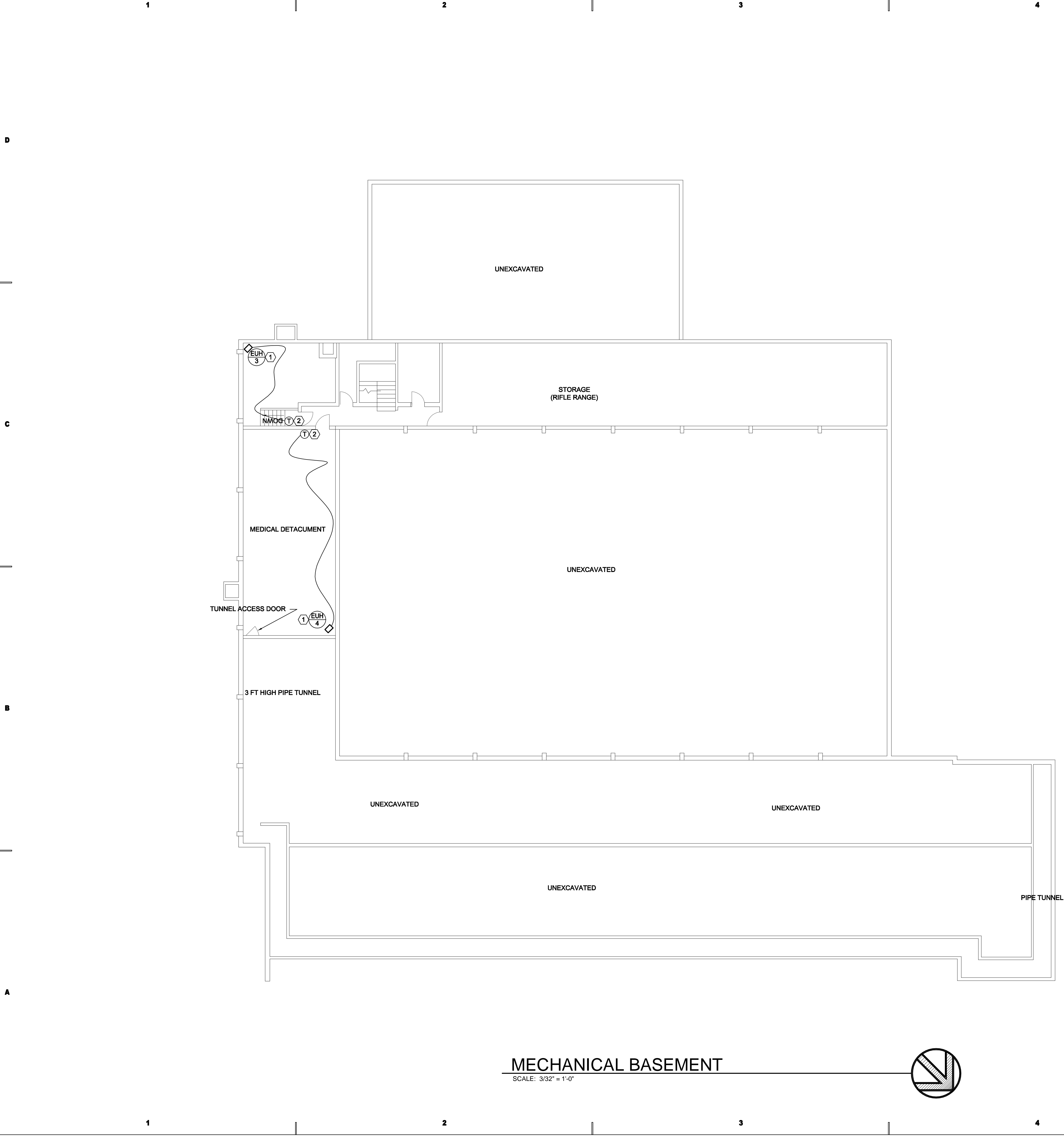
SHEET TITLE

**MECHANICAL
DEMOLITION ROOF**

SHEET NO.

MD104





- SHEET NOTES:**
- 1. COORDINATE EXACT LOCATION WITH EXISTING CONDITIONS.
 - 2. COORDINATE THERMOSTAT LOCATION WITH OWNER.

- GENERAL NOTES:**
- 1. PROVIDE BLANK COVER PLATE FOR THERMOSTAT LOCATIONS NO LONGER IN USE.

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Ogden, Utah

MARK	DATE	REVISION

PROJECT MANAGER:
PC

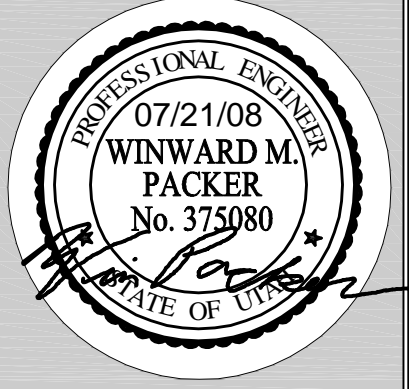
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STAFF

CHECKED BY:
WP

DATE:
JULY 21, 2008

WHW JOB NO.:
07054

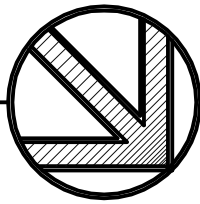
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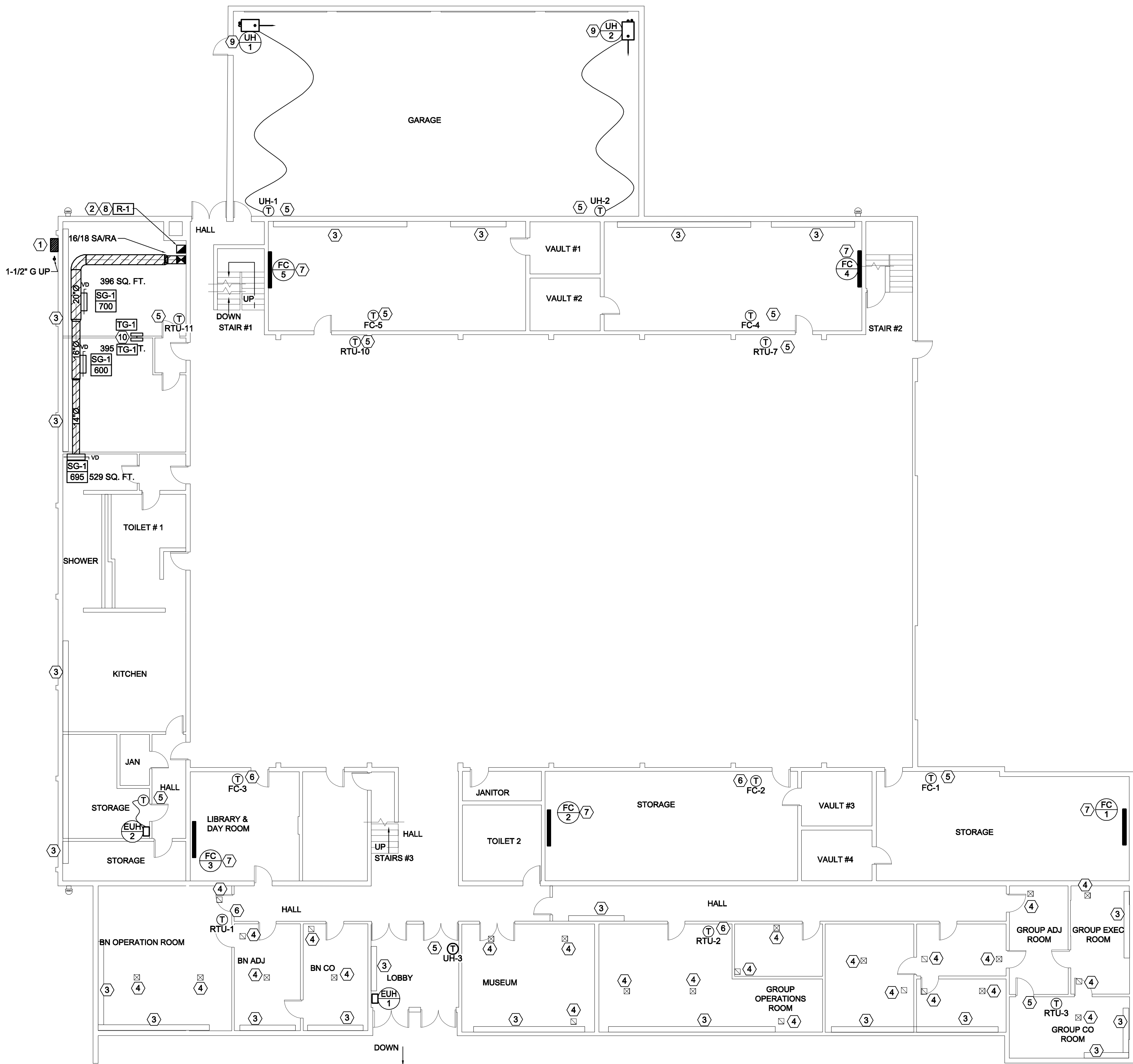


**MECHANICAL
BASEMENT**

SHEET NO.
ME101

MECHANICAL BASEMENT
SCALE: 3/32" = 1'-0"





MECHANICAL FIRST FLOOR

SCALE: 3/16" = 1'-0"

SHEET NOTES:

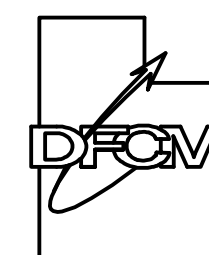
- 1 GAS METER
TOTAL LOAD: 2500 CFH
LONGEST LENGTH: 275'
DESIGN PRESSURE: 2 LBS
SIZED BASED ON BRANCH METHOD
SEE ME103 FOR CONTINUATION.
- 2 EXISTING CONVECTORS TO REMAIN IN PLACE.
- 3 EXISTING DIFFUSER/REGISTER TO REMAIN.
- 4 PROVIDE NEW PACKAGED T-STAT.
COORDINATE EXACT LOCATION WITH OWNER.
- 5 EXISTING THERMOSTAT TO REMAIN.
- 6 COORDINATE EXACT LOCATION OF FAN COIL WITH USER.
- 7 TRANSITION TO RETURN GRILLE.
- 8 PROVIDE 4"Ø 'B' VENT THROUGH ROOF.
SEE DETAIL. CONFIRM SIZE PER MANUFACTURERS RECOMMENDATIONS.
- 9 COORDINATE WITH USER FOR EXACT TRANSFER GRILLE LOCATION.

GENERAL NOTES:

1. EXPOSED DUCT WORK TO BE SPIRAL.
2. PROVIDE BLANK COVER PLATE FOR THERMOSTAT LOCATIONS NO LONGER IN USE.

State of Utah

Department of Administrative Services



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CONSULTANTS



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EMAIL: excellence@whw-engineering.com

PROJECT NAME & ADDRESS

OGDEN ARMORY HVAC REPLACEMENT

DFCM No. 07181470

Ogden, Utah

MARK	DATE	REVISION

PROJECT MANAGER:

PC

DRAWN BY:

STAFF

CHECKED BY:

WP

DATE:

JULY 21, 2008

WHW JOB NO.:

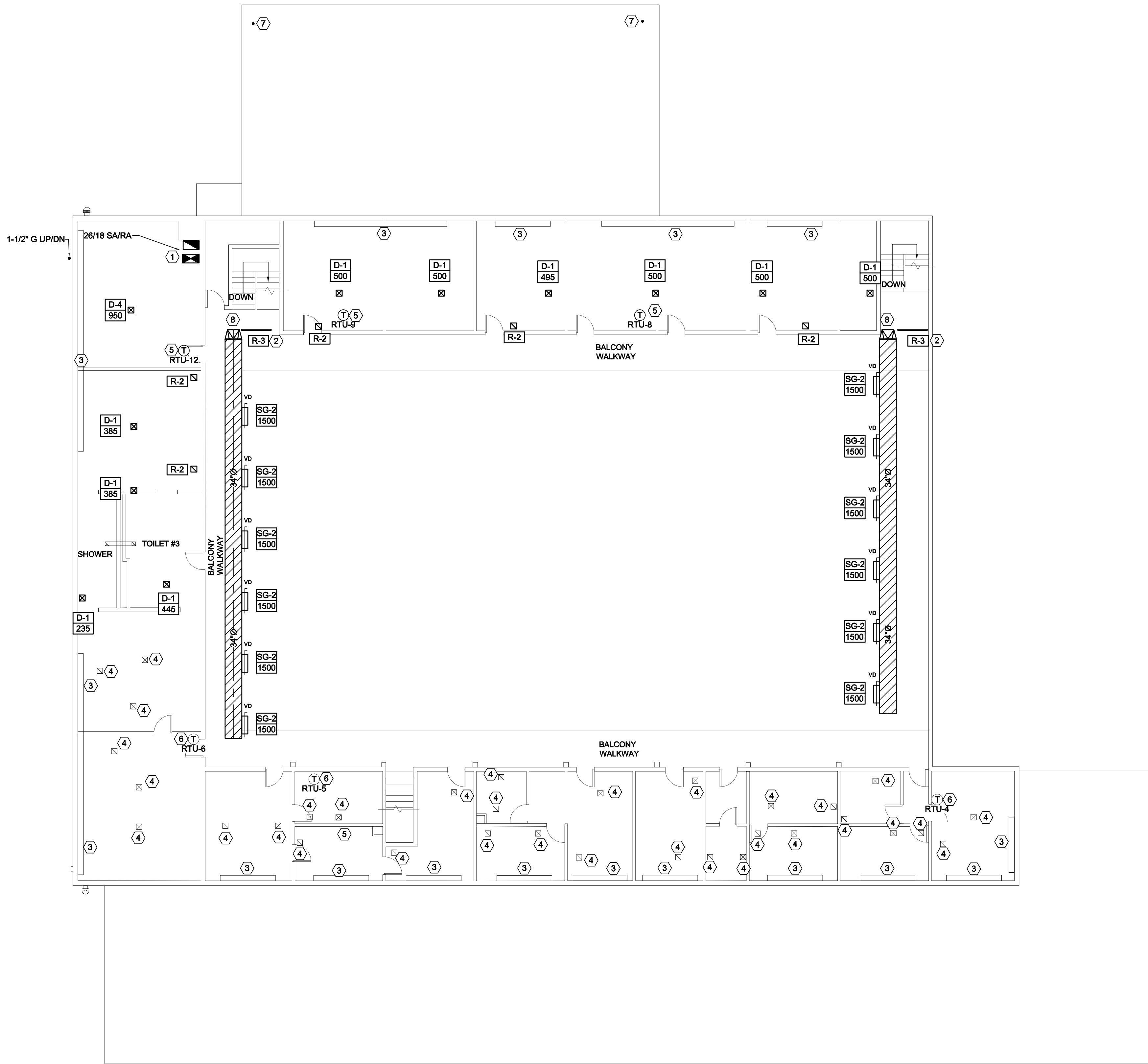
07054

SHEET TITLE

**MECHANICAL
FIRST FLOOR**

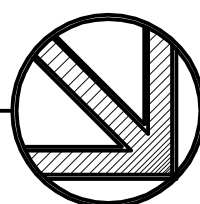
SHEET NO.

ME102



MECHANICAL SECOND FLOOR

SCALE: 3/16" = 1'-0"



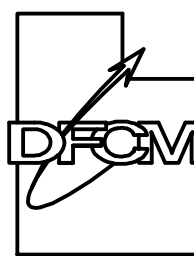
SHEET NOTES:

- 1 NEW MECHANICAL CHASE.
- 2 PROVIDE NEW RETURN GRILLE IN THIS APPROXIMATE LOCATION. FIELD VERIFY EXISTING CONDITIONS.
- 3 EXISTING CONVECTORS TO REMAIN IN PLACE.
- 4 EXISTING DIFFUSER/GRILLE REMAIN.
- 5 PROVIDE NEW PACKAGED THERMOSTAT. COORDINATE EXACT LOCATION WITH USER.
- 6 EXISTING THERMOSTAT TO REMAIN.
- 7 PROVIDE VENT CAP FOR GAS UNIT HEATER BELOW. SEE DETAIL.
- 8 SEE ME104 FOR CONTINUATION.

GENERAL NOTES:

1. EXPOSED DUCT WORK TO BE SPIRAL.
2. PROVIDE BLANK COVER PLATE FOR THERMOSTAT LOCATIONS NO LONGER IN USE.

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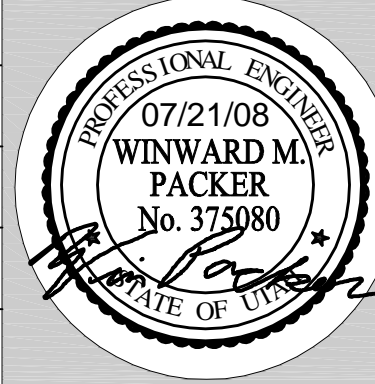
07054

SHEET TITLE

**MECHANICAL
SECOND FLOOR**

SHEET NO.

ME103



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PROJECT NAME & ADDRESS

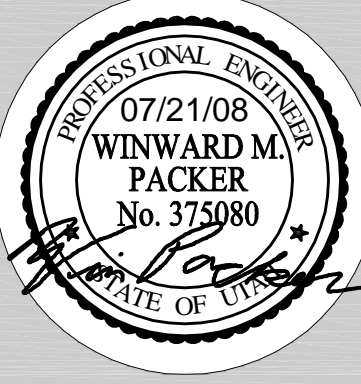
**OGDEN ARMORY
HVAC REPLACEMENT**

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STAFF
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WP
DATE:
JULY 21, 2008
WHW JOB NO.:
07054



SHEET TITLE

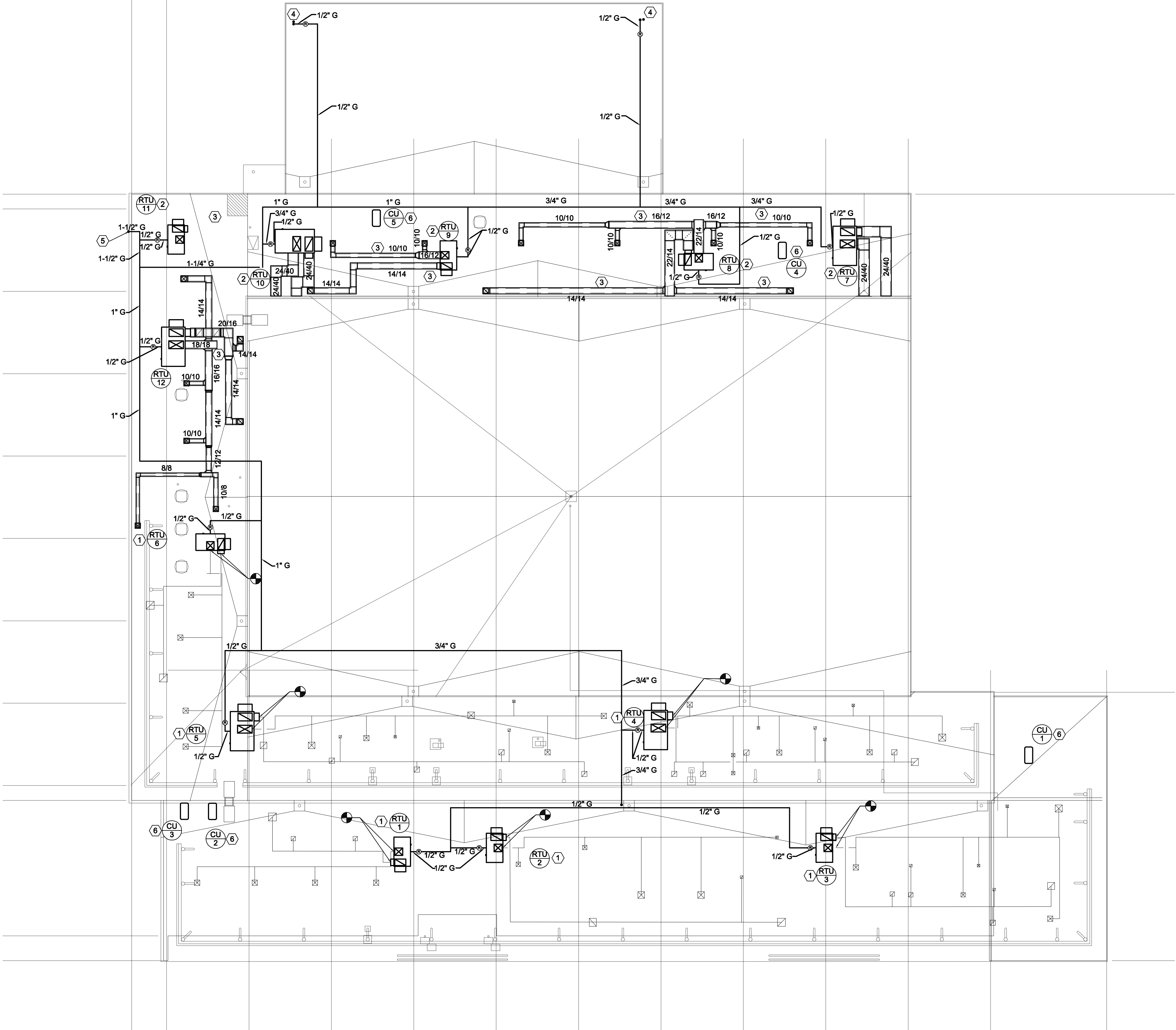
**MECHANICAL
ROOF**

SHEET NO.

ME104

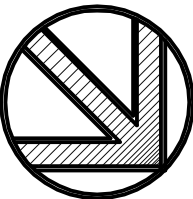
SHEET NOTES:

- 1 PROVIDE NEW HEATING/Cooling RTU ON EXISTING ROOF CURB.
- 2 PROVIDE NEW RTU ON NEW ROOF CURB.
- 3 DUCTWORK ON ROOF.
- 4 PROVIDE VENT CAP FOR GAS UNIT HEATER. SEE DETAIL.
- 5 1-1/2" G DN TO GAS METER. SEE DETAIL. SEE ME102 FOR CONTINUATION.
- 6 COORDINATE EXACT LOCATION OF CONDENSING UNIT WITH EXISTING CONDITIONS.



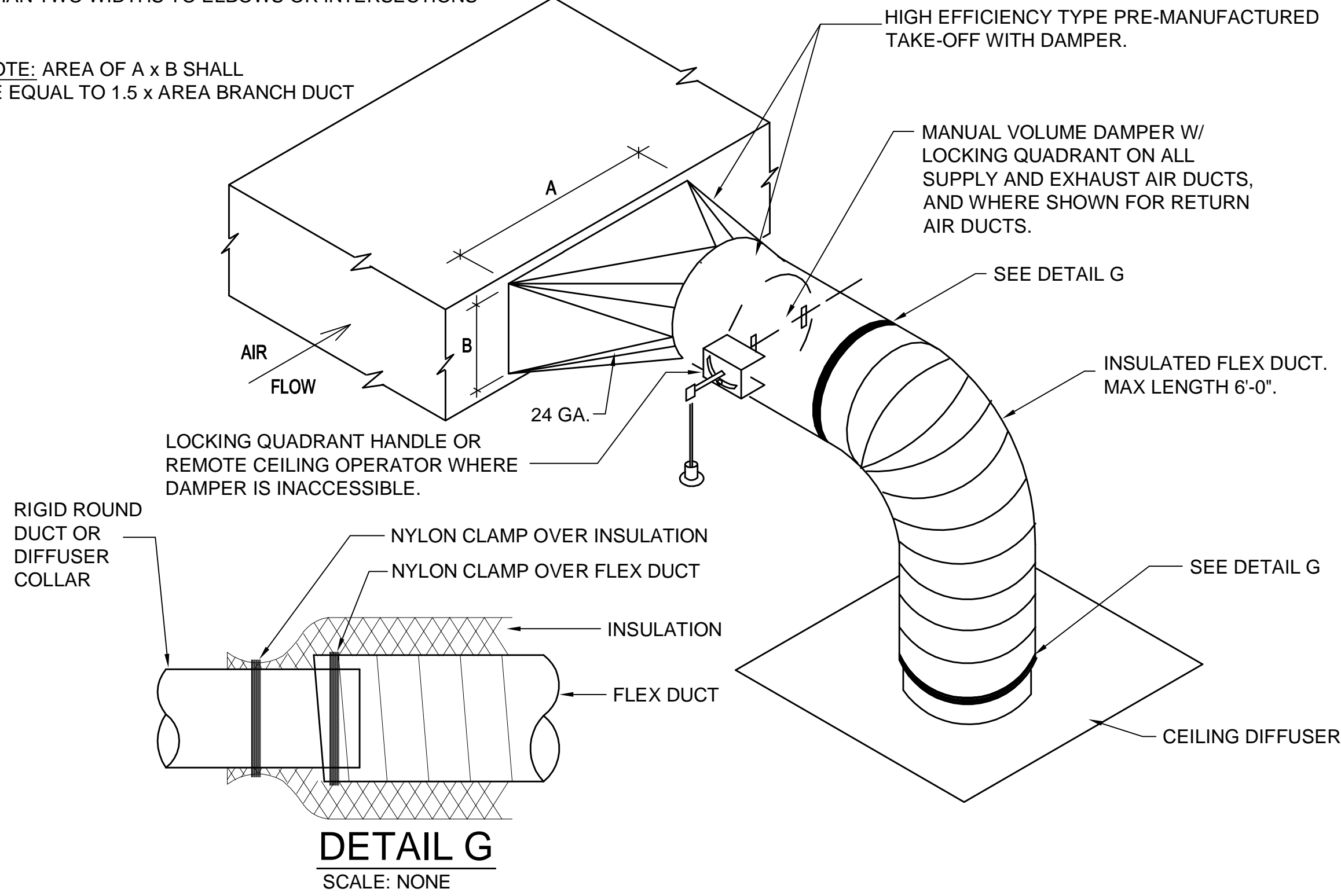
MECHANICAL ROOF

SCALE: 3/16" = 1'-0"



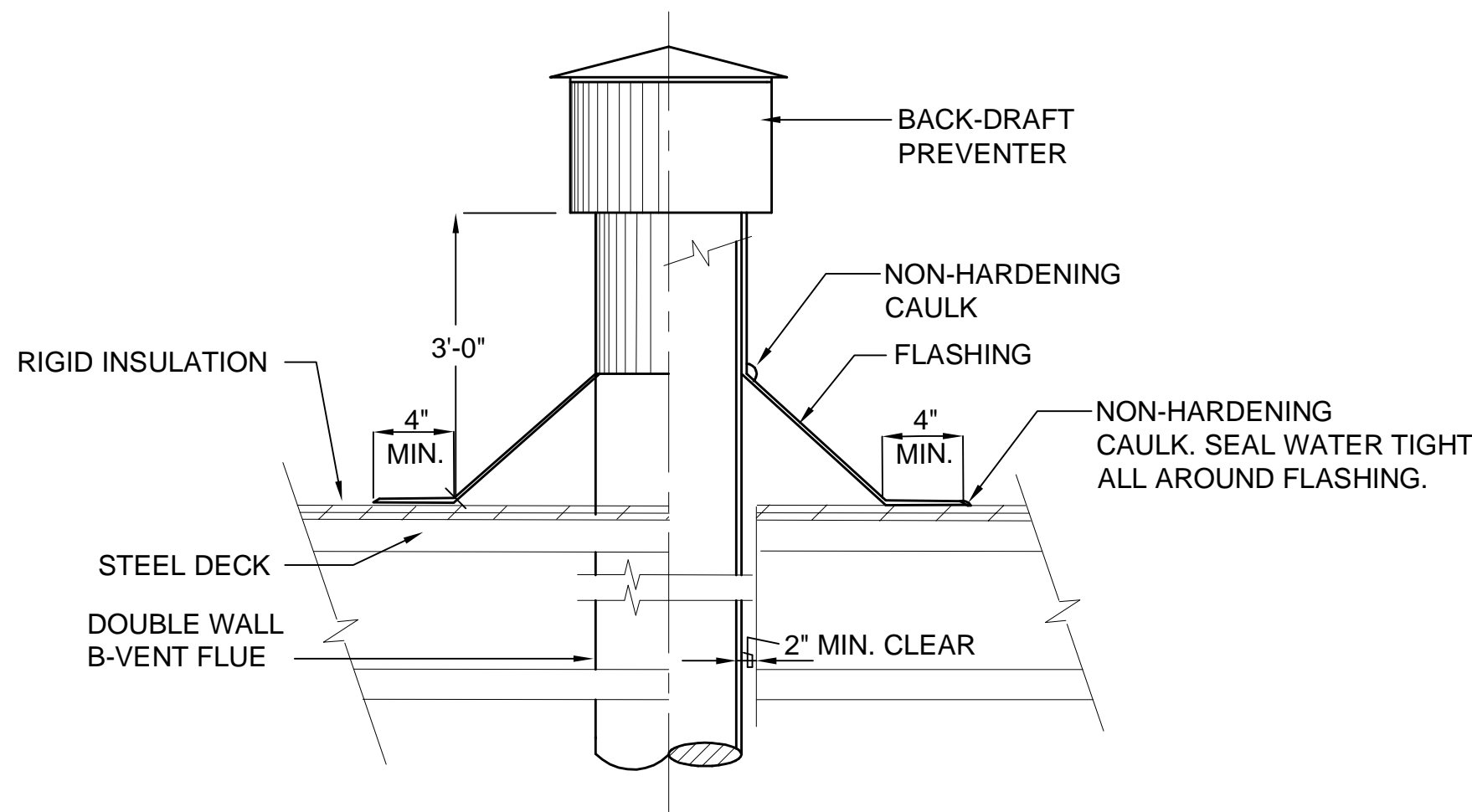
NOTE: TAKE-OFFS SHOULD NOT BE INSTALLED CLOSER THAN TWO WIDTHS TO ELBOWS OR INTERSECTIONS

NOTE: AREA OF A x B SHALL BE EQUAL TO 1.5 x AREA BRANCH DUCT

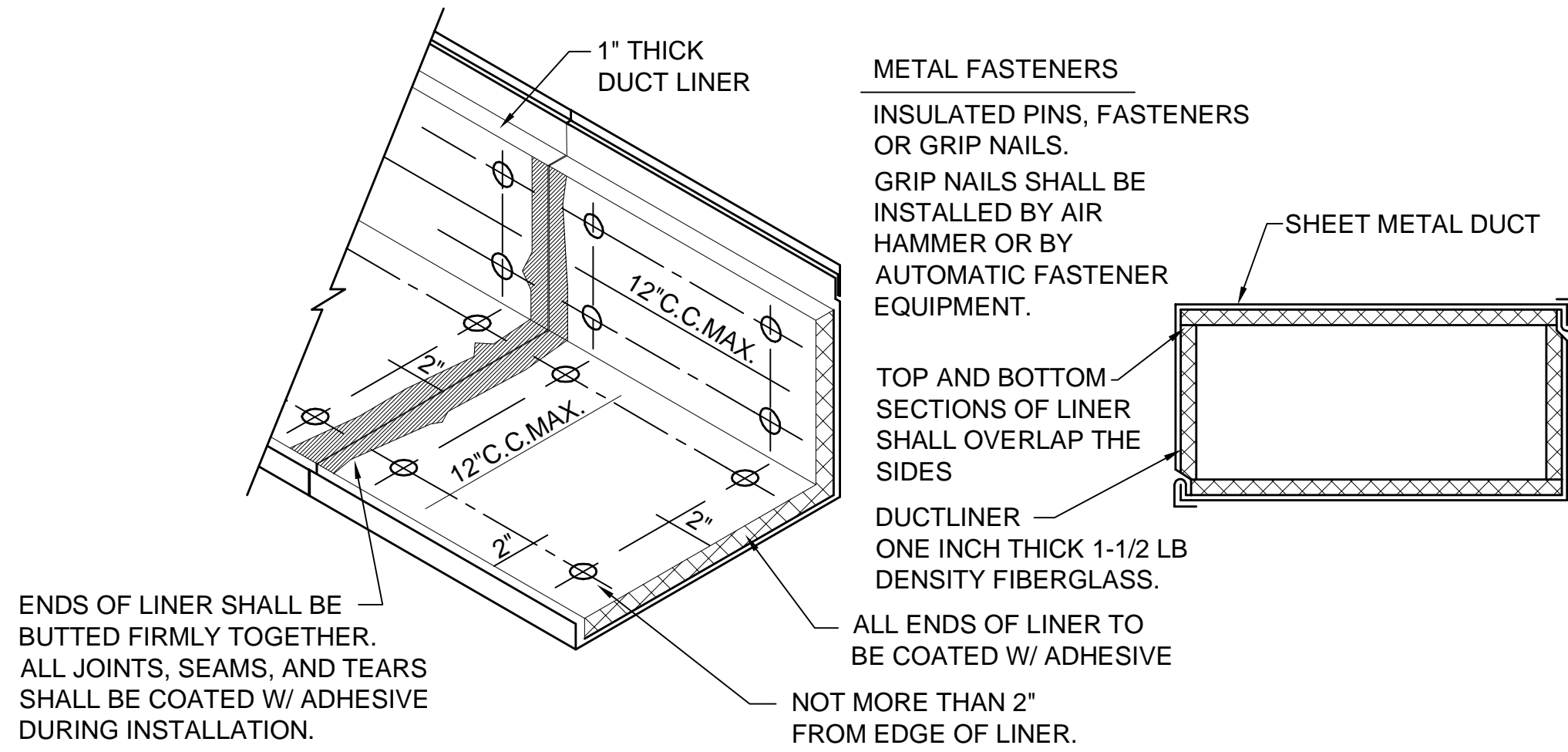


DETAIL G
SCALE: NONE

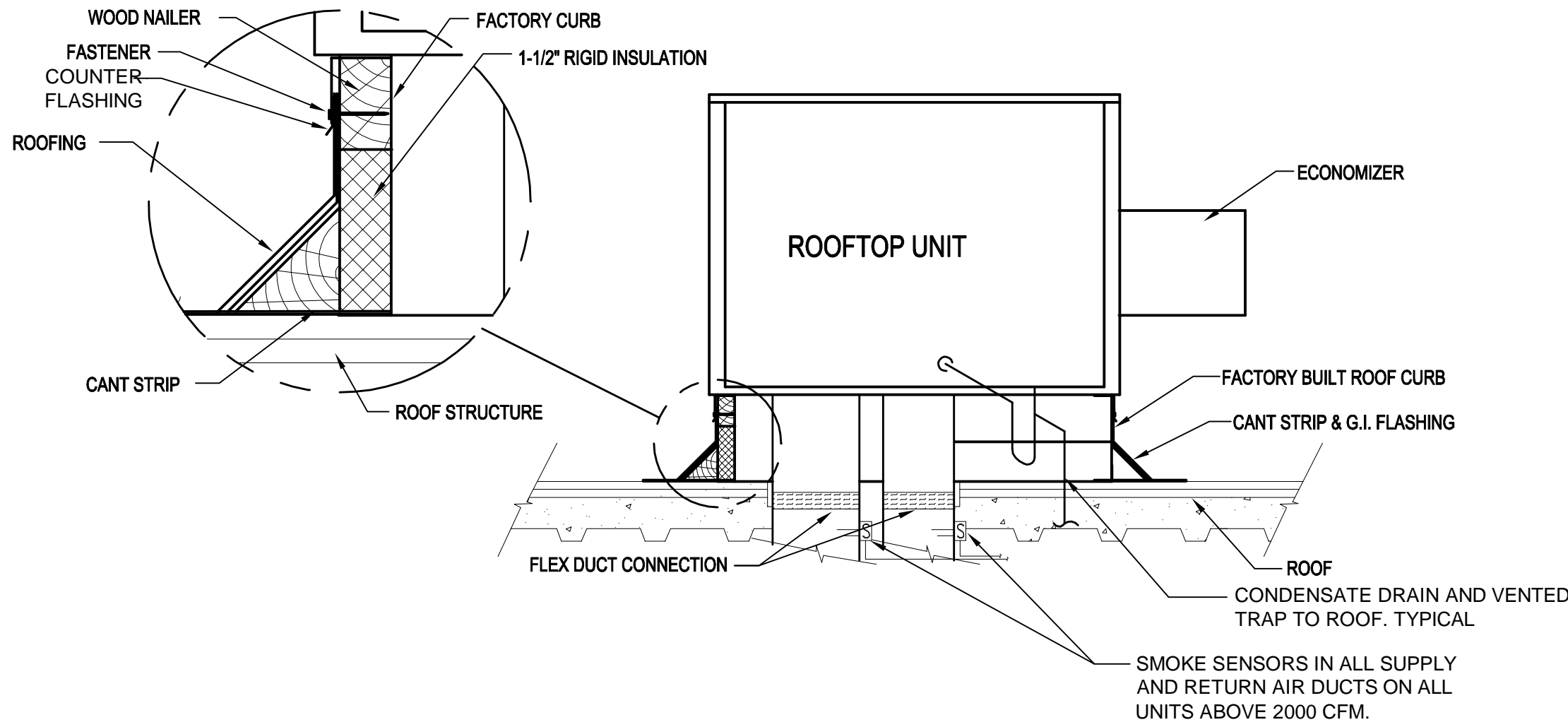
C1 SQUARE-TO-ROUND TAKE-OFF DETAIL
SCALE: NONE



A2 FLUE THRU ROOF DETAIL
SCALE: NONE

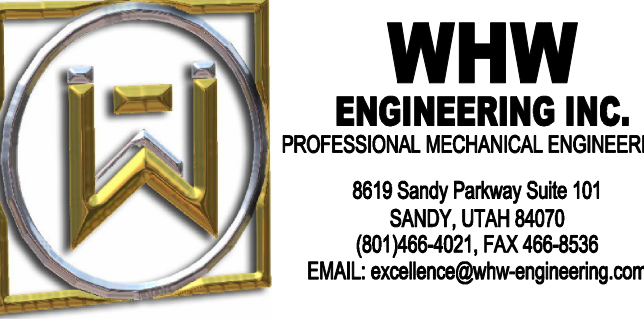


C4 DUCT LINER DETAIL
SCALE: NONE



A4 ROOFTOP UNIT DETAIL
SCALE: NONE

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PROJECT NAME & ADDRESS

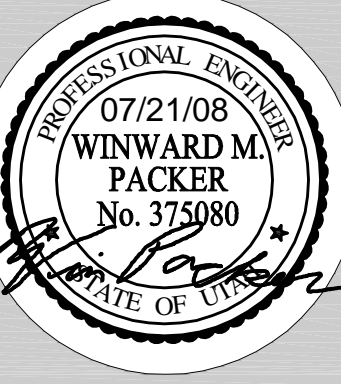
**OGDEN ARMORY
HVAC REPLACEMENT**

DFCM No. 07181470

Ogden, Utah

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SHEET TITLE



MECHANICAL DETAILS

SHEET NO.

ME501

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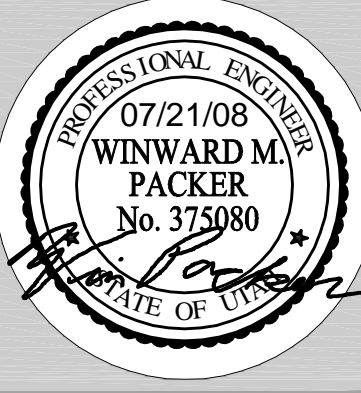
**OGDEN ARMORY
HVAC REPLACEMENT**

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Ogden, Utah

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PROJECT MANAGER:
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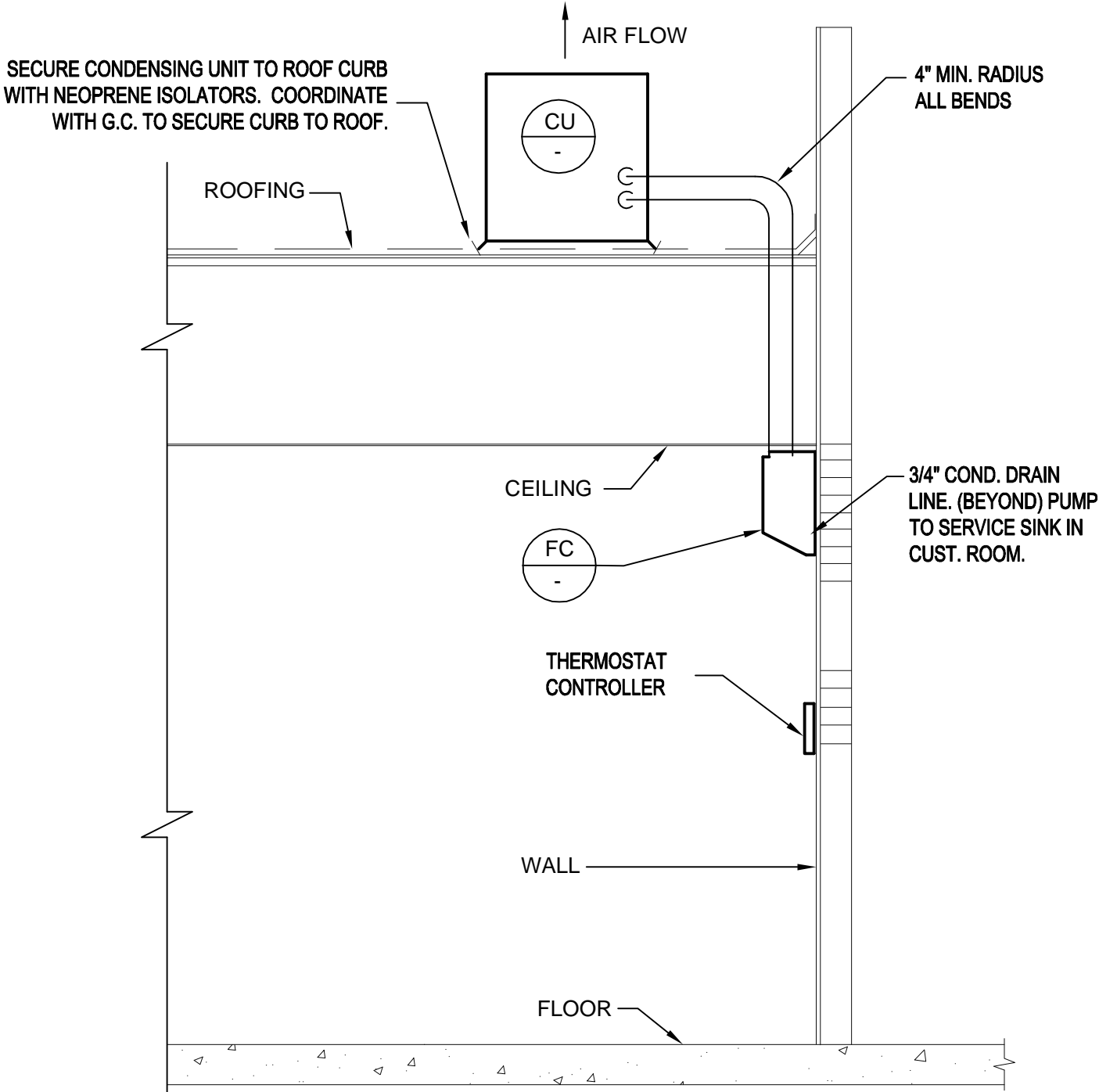


MECHANICAL DETAILS

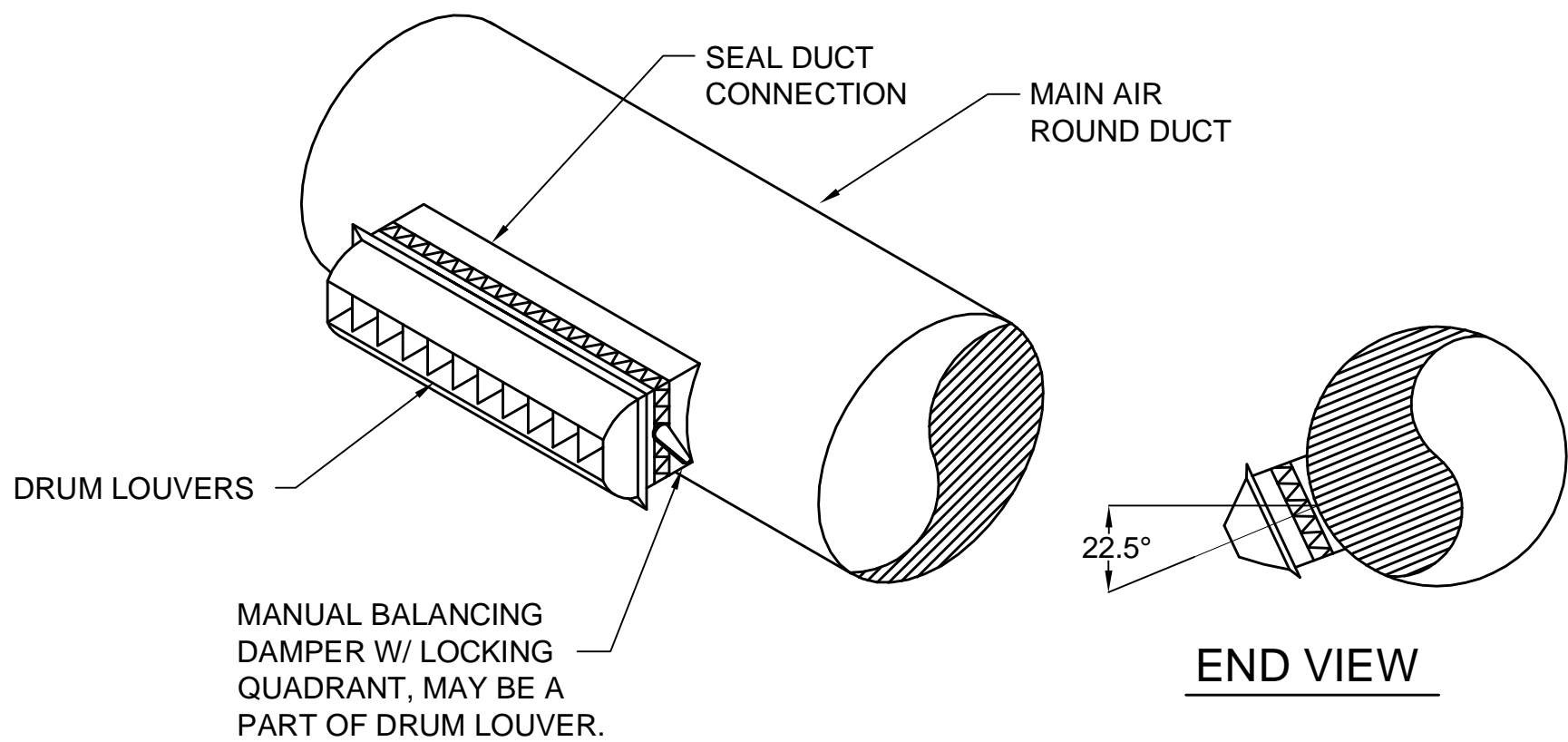
SHEET NO.

ME502

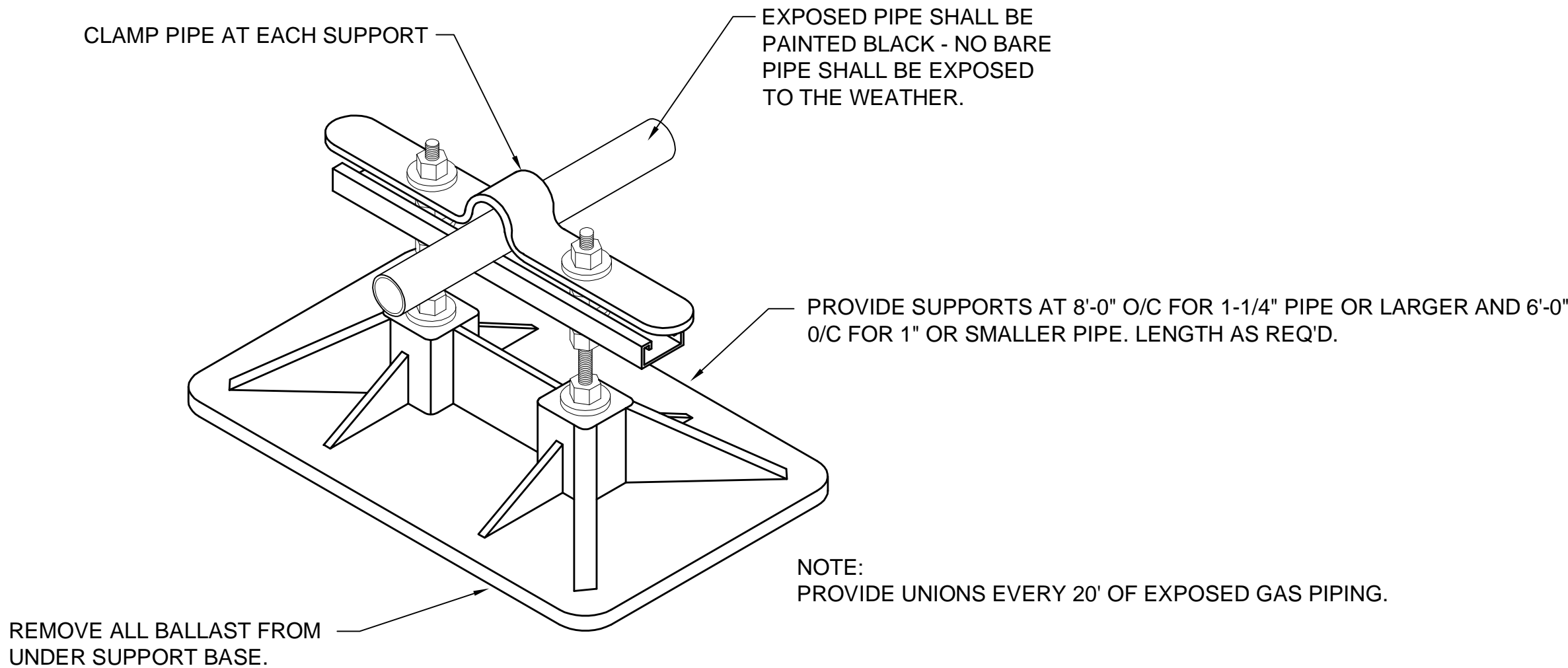
NOTE:
DRY-CHARGED LINE SETS ARE AVAILABLE IN
LENGTHS OF 16, 22, 32, & 49 FEET. LENGTHS ARE
TO BE KEPT AS SHORT AS POSSIBLE. COILING OF
LINES THAT ARE TOO LONG WILL NOT BE
ACCEPTABLE AND WILL BE REPLACED AT THE
CONTRACTORS EXPENSE. OPTIONAL: HARD
REFRIGERANT PIPING. ALL CONNECTIONS ARE TO
BE FLARED. CONTRACTOR MAY ALSO USE HARD
PIPE AND FITTINGS. SEE SPECIFICATIONS FOR PIPE
AND INSULATION.



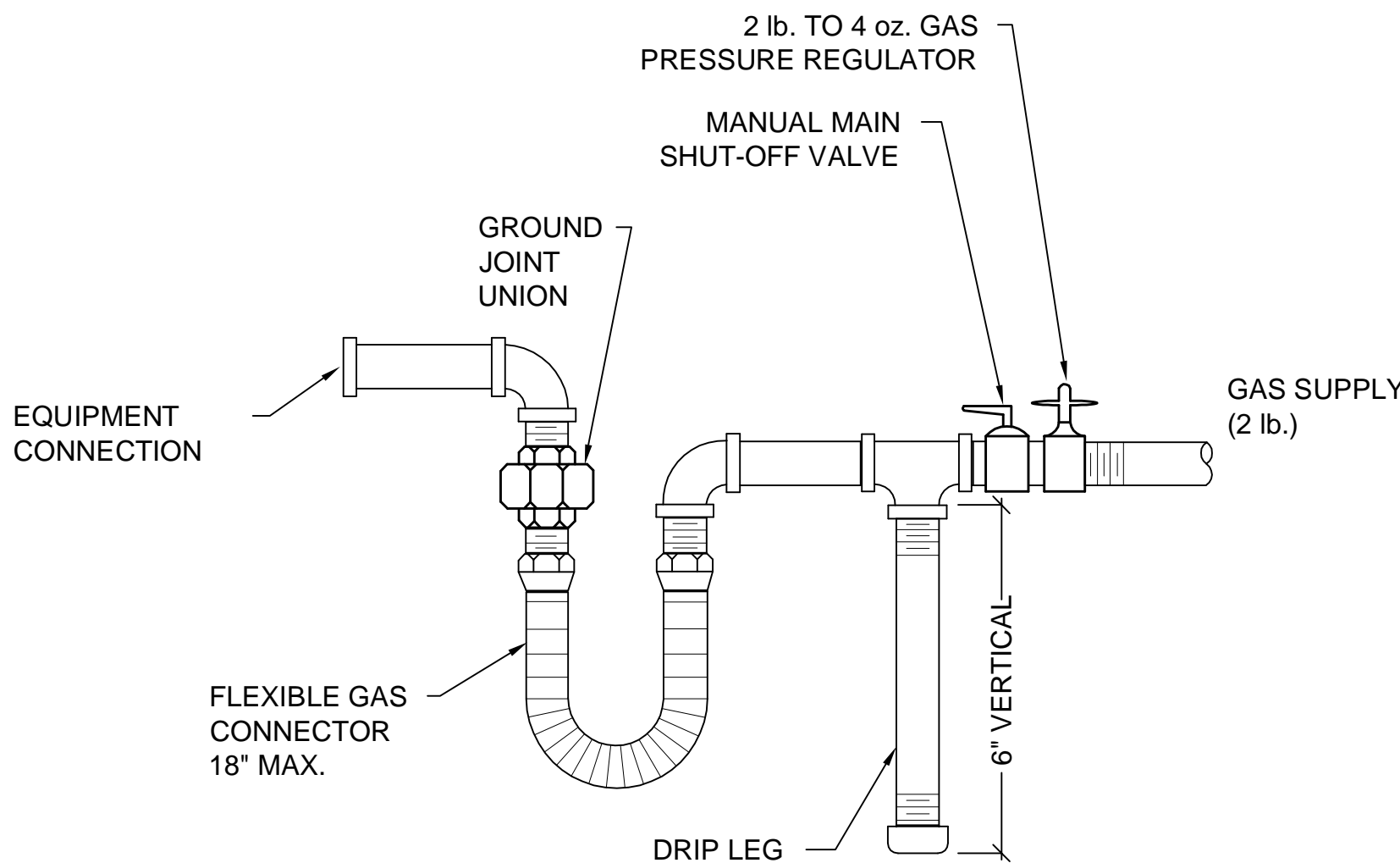
B2 WALL MOUNT AC UNIT DETAIL
SCALE: NONE



A2 DRUM LOUVER DETAIL
SCALE: NONE



C4 GAS SUPPORT ON ROOF DETAIL
SCALE: NONE









A4 GAS LINE CONNECTION DETAIL
SCALE: NONE

D

C

B

A

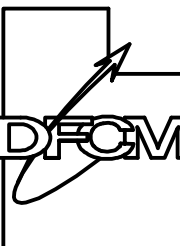
DIFFUSER SCHEDULE								
SYMBOL	TYPE	MAX CFM	FACE SIZE	NECK SIZE	CEILING TYPE	BLOW	PATTERN	SCHEDULE NOTES
<div>D-1 CFM</div>	CEILING	500	12/12	12/12	HARD	4--WAY		1,2,3,4,5
<div>D-2 CFM</div>	CEILING	750	15/15	15/15	HARD	4--WAY		1,2,3,4,5
<div>D-3 CFM</div>	CEILING	300	9/9	9/9	HARD	4--WAY		1,2,3,4,5
<div>D-4 CFM</div>	CEILING	1000	18/18	18/18	HARD	4--WAY		1,2,3,4,5
<div>SG-1 CFM</div>	DUCT MOUNTED	700	18/10	18/10	N/A	1--WAY		1,2,3,4,5
<div>SG-2 CFM</div>	DUCT MOUNTED	1000	12/24	12/24	N/A	1--WAY		1,2,3,5,6
<div>1. PROVIDE LAY-IN CEILING AND BORDER / MODULE AS REQUIRED. SEE ARCHITECTURAL CEILING PLANS.</div> <div>2. MAXIMUM NC 25 AT CFM LISTED.</div> <div>3. PROVIDE TRANSITION TO DIFFUSER NECK SIZE AS REQUIRED TO DUCT WORK SHOWN ON PLAN.</div> <div>4. DIFFUSER SHALL BE PRICE MODEL SMD OR EQUAL BY APPROVED MANUFACTURER IN SPECIFICATIONS. MATCH EXISTING.</div> <div>5. FINISH SHALL BE STANDARD WHITE.</div> <div>6. SHALL BE PRICE HCD OR EQUAL BY APPROVED MANUFACTURE IN SPECIFICATIONS.</div>								

REGISTER, LOUVER & GRILLE SCHEDULE							
SYMBOL	TYPE	SERVICE	MAX CFM	NOMINAL SIZE	THROAT SIZE	CEILING TYPE	SCHEDULE NOTES
<div>R-1</div>	DUCT MOUNTED	RETURN	1200	22/22	22/22	N/A	1,2,3,4
<div>R-2</div>	CEILING	RETURN	1200	22/22	22/22	HARD	1,2,3,4
<div>R-3</div>	SIDEWALL	RETURN	9000	60/36	60/36	N/A	1,3,4,6
<div>TG-1</div>	SIDEWALL	TRANSFER	700	16/16	16/16	N/A	1,2,3,4
<div>REGISTER, LOUVER AND DIFFUSER SCHEDULE NOTES:</div> <div>1. MAXIMUM NC = 25 @ MAXIMUM CFM NOTED.</div> <div>2. SHALL BE PRICE 535 OR EQUAL BY OTHER APPROVED MANUFACTURERS.</div> <div>3. SEE SPECIFICATIONS FOR APPROVED MANUFACTURERS.</div> <div>4. FINISH SHALL BE STANDARD WHITE.</div> <div>5. FINISH TO BE SPECIFIED BY ARCH</div> <div>6. SHALL BE PRICE 90 OR EQUAL BY OTHER APPROVED MANUFACTURERS.</div>							

ROOFTOP AIR CONDITIONER SCHEDULE (GAS HEAT)																
SYMBOL	MANUFACTURER & MODEL NUMBER	SA CFM	OSA CFM	E.S.P. IN W.G.	HEATING	COOLING			ELECTRICAL					EER/ SEER	OPER. WT. (LBS)	SCHEDULE NOTES
					TOT. MIN. INPUT MBH	AMB. AIR (DB)	AMB. AIR (WB)	MIN. TOTAL MBH	V - Ø - Hz	COMPRESSOR #	COMPRESSOR TOTAL RLA	MCA	MOP			
<div>RTU 1</div>	TRANE YHC048	1385	275	.75	99.8	95	67	48.5	208/3/60	1	14.6	28.3	40	15	950	
<div>RTU 2</div>	TRANE YHC048	1615	325	.75	99.8	95	67	50.0	208/3/60	1	14.6	28.3	40	15	950	
<div>RTU 3</div>	TRANE YHC048	1890	380	.75	99.8	95	67	51.4	208/3/60	1	14.6	28.3	40	15	950	
<div>RTU 4</div>	TRANE YHC060	2325	465	.75	108.2	95	67	52.0	208/3/60	1	17.6	32.1	45	15	1000	
<div>RTU 5</div>	TRANCE YHC072	2520	505	.75	124.8	95	67	75.6	208/3/60	1	22.4	36.5	50	11.2	1300	
<div>RTU 6</div>	TRANE YHC048	1580	315	.75	99.8	95	67	49.8	208/3/60	1	14.6	28.3	40	15	950	
<div>RTU 7</div>	TRANE YFD240	9000	1800	.75	332.8	95	67	261	208/3/60	2	48/25	113	150	10.2	2800	
<div>RTU 8</div>	TRANE YHC060	1995	400	.75	108.2	95	67	63.5	208/3/60	1	17.6	32.1	45	15	1000	
<div>RTU 9</div>	TRANE YHC036	1000	200	.75	99.8	95	67	37.1	208/3/60	1	11.5	21.9	30	15	800	
<div>RTU 10</div>	TRANE YFD240	9000	1800	.75	332.8	95	67	261	208/3/60	2	48/25	113	150	10.2	2800	
<div>RTU 11</div>	TRANE YHC060	1995	400	.75	108.2	95	67	63.5	208/3/60	1	17.6	32.1	45	15	1000	
<div>RTU 12</div>	TRANE YSC072	2400	480	.75	124.8	95	67	75.0	208/3/60	1	22.4	36.5	50	11.2	1400	
<div>1. E.S. P. DOES NOT INCLUDE LOSSES THROUGH ACCESSORIES.</div> <div>2. RATED MINIMUM INPUT AT SEA LEVEL.</div> <div>3. PROVIDE ONE 15 AMP, 120 VOLT, DUPLEX GFCI SERVICE OUTLET. FACTORY INSTALLED, FIELD WIRED.</div> <div>4. BELT DRIVE UNIT</div> <div>5. 2 STAGE HEATING</div> <div>6. REFRIGERANT 410A</div>																

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HVAC REPLACEMENT**

DFCM No. 07181470

Ogden, Utah

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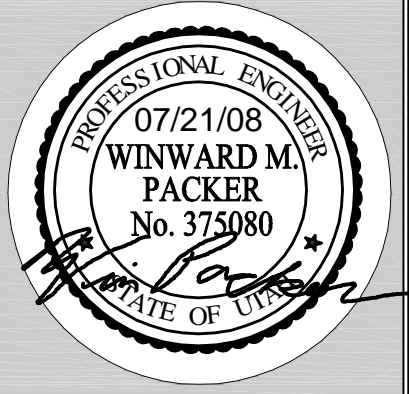
PROJECT MANAGER:
PC

DRAWN BY:
STAFF

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WP

DATE:
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07054



SHEET TITLE

MECHANICAL SCHEDULES

SHEET NO.
ME601

D

C

B

A

1

2





3

4

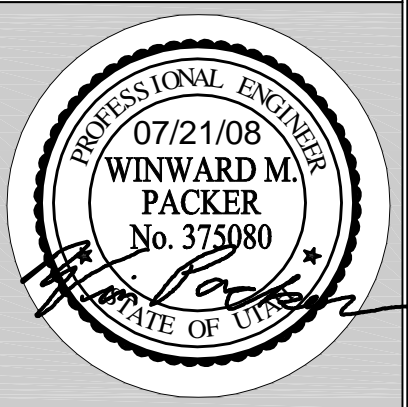
SPLIT SYSTEM SCHEDULE - OUTDOOR UNIT										
ITEM NO.	MANUFACTURER AND MODEL NO.	AREA & ROOMS SERVED	CAPACITY BTU/HR		SEER	ELECTRICAL			OPER WT. LBS.	COMMENTS
			HEATING	COOLING		MOCP	MCA	V-Ø-Hz		
CU 1	DAIKIN MUZ-A24NA	STORAGE	23,200	22,200	16	20	17	208/1/60	128	
CU 2	DAIKIN MUZ-A24NA	STORAGE	23,200	22,200	16	20	17	208/1/60	128	
CU 3	DAIKIN MUZ-A12NA	LIBRARY	13,600	12,000	17	15	12	208/1/60	82	
CU 4	DAIKIN MUZ-A24NA	STORAGE	23,200	22,200	16	20	17	208/1/60	128	
CU 5	DAIKIN MUZ-A24NA	STORAGE	23,200	22,200	16	20	17	208/1/60	128	
1. REFRIGERANT 410-A										

GAS FIRED UNIT HEATER SCHEDULE											
SYMBOL	MANUFACTURER & MODEL NUMBER	AREA SERVED	C.F.M.	INPUT MBH	OUTPUT MBH SEA LEVEL	MOTOR			FLUE	OPER WT. LBS.	COMMENTS
						V - Ø - Hz	HP	TOTAL AMPS			
UH 1	REZNOR UDAP-75	GARAGE	960	75	62	115/1/60	.06	3.3	4"	75	1
UH 2	REZNOR UDAP-75	GARAGE	960	75	62	115/1/60	.06	3.3	4"	75	1
NOTE: PROVIDE WITH HANGER RODS C/W VIBRATION ISOLATORS SEISMICALLY BRACE UNITS.											

SPLIT SYSTEM SCHEDULE - INDOOR UNIT								
ITEM NO.	MANUFACTURER AND MODEL NO.	AREA & ROOMS SERVED	CFM	ELECTRICAL			OPER. WT. LBS.	COMMENTS
				MCA	FLA	V-Ø-Hz		
FC 1	MITSUBISHI MSZ-A24NA	STORAGE	300-560	1.2	.76	208/1/60	23	
FC 2	MITSUBISHI MSZ-A24NA	STORAGE	300-560	1	.76	208/1/60	37	
FC 3	MITSUBISHI MSZ-A12NA	LIBRARY	150-350	1	.76	208/1/60	37	
FC 4	MITSUBISHI MSZ-A24NA	STORAGE	300-560	1	.76	208/1/60	37	
FC 5	MITSUBISHI MSZ-A24NA	LIBRARY	300-560	1	.76	208/1/60	37	
1. R410A REFRIGERANT								
2. PROVIDE CONDENSATE PUMP. ROUTE CONDENSATE LINE TO EXTERIOR.								
3. UNIT SHALL BE WALL MOUNTED.								
4. PROVIDE WITH WIRELESS THERMOSTAT.								

ELECTRIC UNIT HEATER SCHEDULE						
SYMBOL	ELECTRICAL DATA 208 V				MANUFACTURER AND CATALOG NUMBER	REMARKS
	BTUH	KW	PH	HZ		
	12600	3.7	1	60	QMARK MUH05021	2
	6825	2	1	60	QMARK CWH3404	1, 2
	17000	5	1	60	QMARK MUH05-81	2
	51,200	15	1	60	QMARK MUH15-8	2
1. PROVIDE WITH SURFACE MOUNTING ADAPTER.						
2. UNIT SHALL HAVE BUILT IN THERMOSTAT.						

MARK	DATE	REVISION

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SHEET TITLE	

EQUIPMENT SCHEDULE

UNIT #	FUNCTION	LOAD	VOLT	PHASE	FULL LOAD AMPS	CONDUIT SIZE	WIRES			OCPD TYPE	AMPS	REF. NOTES		REMARKS
							NO. SETS	NO.	SIZE			STARTER	DISCONNECT	
CJ-1	CONDENSING UNIT	17 MCA	240	1	13.60	3/4"	1	2	12	12	CB	25	2A	
CJ-2	CONDENSING UNIT	17 MCA	240	1	13.60	3/4"	1	2	12	12	CB	25	2A	
CJ-3	CONDENSING UNIT	12 MCA	240	1	9.80	3/4"	1	2	12	12	CB	20	2A	
CJ-4	CONDENSING UNIT	17 MCA	240	1	13.60	3/4"	1	2	12	12	CB	25	2A	
CJ-5	CONDENSING UNIT	17 MCA	240	1	13.60	3/4"	1	2	12	12	CB	25	2A	
EUH-1	ELECTRIC UNIT HEATER	3.8 KVA	240	1	15.00	3/4"	1	2	12	12	CB	20	2A	
EUH-2	ELECTRIC UNIT HEATER	2 KVA	240	1	8.33	3/4"	1	2	12	12	CB	20	2A	
EUH-3	ELECTRIC UNIT HEATER	5 KVA	208	1	24.04	3/4"	1	2	8	10	CB	35	2A	
EUH-4	ELECTRIC UNIT HEATER	15 KVA	208	1	72.12	1"	1	2	2	8	CB	100	2A	
FC-1	FAN COIL UNITS	.76 FLA	240	1	0.76	3/4"	1	2	12	12	CB	15	4A	
FC-2	FAN COIL UNITS	.76 FLA	240	1	0.76	3/4"	1	2	12	12	CB	15	4A	
FC-3	FAN COIL UNITS	.76 FLA	240	1	0.76	3/4"	1	2	12	12	CB	15	4A	
FC-4	FAN COIL UNITS	.76 FLA	240	1	0.76	3/4"	1	2	12	12	CB	15	4A	
FC-5	FAN COIL UNITS	.76 FLA	240	1	0.76	3/4"	1	2	12	12	CB	15	4A	
RTU-1	ROOFTOP AIR CONDITIONER	26.3 MCA	208	3	22.84	3/4"	1	3	10	10	CB	35	2A	
RTU-2	ROOFTOP AIR CONDITIONER	26.3 MCA	208	3	22.84	3/4"	1	3	10	10	CB	35	2A	
RTU-3	ROOFTOP AIR CONDITIONER	26.3 MCA	208	3	22.84	3/4"	1	3	10	10	CB	35	2A	
RTU-4	ROOFTOP AIR CONDITIONER	32.1 MCA	208	3	25.68	3/4"	1	3	8	10	CB	40	2A	
RTU-5	ROOFTOP AIR CONDITIONER	36.5 MCA	208	3	29.20	3/4"	1	3	8	10	CB	45	2A	
RTU-6	ROOFTOP AIR CONDITIONER	26.3 MCA	208	3	22.84	3/4"	1	3	10	10	CB	35	2A	
RTU-7	ROOFTOP AIR CONDITIONER	113 MCA	208	3	90.40	1-1/2"	1	3	10	6	CB	150	2A	
RTU-8	ROOFTOP AIR CONDITIONER	32.1 MCA	208	3	25.68	3/4"	1	3	8	10	CB	40	2A	
RTU-9	ROOFTOP AIR CONDITIONER	21.8 MCA	208	3	17.52	3/4"	1	3	10	10	CB	30	2A	
RTU-10	ROOFTOP AIR CONDITIONER	113 MCA	208	3	90.40	1-1/2"	1	3	10	6	CB	150	2A	
RTU-11	ROOFTOP AIR CONDITIONER	32.1 MCA	208	3	25.68	3/4"	1	3	8	10	CB	40	2A	
RTU-12	ROOFTOP AIR CONDITIONER	36.5 MCA	208	3	29.20	3/4"	1	3	8	10	CB	45	2A	
UH-1	GAS FIRED UNIT HEATER	3.3 FLA	120	1	3.30	3/4"	1	2	12	12	CB	15	4A	
UH-2	GAS FIRED UNIT HEATER	3.3 FLA	120	1	3.30	3/4"	1	2	12	12	CB	15	4A	

NOTES:

1. NON-FUSED DISCONNECT SWITCH
2. FUSED DISCONNECT SWITCH
3. BREAKER IN ENCLOSURE
4. MANUAL STARTER THERMAL OVERLOAD
5. MAGNETIC STARTER
6. MAGNETIC STARTER/NON-FUSED DISCONNECT COMBINATION
7. MAGNETIC STARTER/FUSED DISCONNECT COMBINATION
8. MAGNETIC STARTER/BREAKER COMBINATION
9. VARIABLE FREQUENCY DRIVE
10. REDUCED VOLTAGE STARTER
11. DIRECT CONNECTION
12. RECEPTACLE/SPECIAL PURPOSE OUTLET/ETC.
13. TWO-SPEED STARTER, COORDINATE WITH MOTOR TYPE

- A. FURNISHED, INSTALLED, AND CONNECTED UNDER DIVISION 16
B. FURNISHED AND INSTALLED UNDER ANOTHER DIVISION REQUIRING CONNECTION UNDER DIVISION 16.
C. FURNISHED UNDER ANOTHER DIVISION BUT INSTALLED AND CONNECTED UNDER DIVISION 16.
D. FURNISHED, INSTALLED AND CONNECTED UNDER ANOTHER DIVISION.

CB = CIRCUIT BREAKER - THERMAL MAGNETIC
CKW = CHILLER KILOWATTS

NOTE 1: PER 259.122(A), EQUIPMENT GROUND IS NOT REQUIRED TO BE LARGER THAN PHASE CONDUCTOR.

GENERAL NOTES

1. CONSULT ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATION OF ALL LIGHTING FIXTURES.
2. VERIFY ALL EQUIPMENT DIMENSIONS AND LOCATIONS BEFORE BEGINNING ROUGH IN. CONSULT ALL APPLICABLE CONTRACT DRAWINGS AND SHOP DRAWINGS TO INSURE NEC CODE CLEARANCES REQUIRED AROUND ALL ELECTRICAL EQUIPMENT.
3. CONTRACTOR SHALL VERIFY ALL ELECTRICAL LOADS (VOLTAGE, PHASE, CONNECTION REQUIREMENTS, ETC.) OF EQUIPMENT FURNISHED UNDER DIVISION 15 WITH APPROVED MECHANICAL SHOP DRAWINGS BEFORE BEGINNING ROUGH IN.
4. SEE SECTION 16510 OF THE SPECIFICATION REQUIRED COORDINATION MEETINGS WITH MECHANICAL SHOP DRAWINGS BEFORE BEGINNING ROUGH IN.
5. SEE APPLICABLE SHOP DRAWINGS FOR ROUGH IN LOCATION OF ALL EQUIPMENT, WIRING DEVICES, ETC. WHERE APPLICABLE MOUNT ALL WIRING DEVICES ABOVE BACK SPLASH EXCEPT THOSE SERVING UNDER COUNTER EQUIPMENT.
6. SEE SPECIFICATION FOR ENERGY SAVING LAMP AND BALLAST REQUIREMENTS.
7. FINISHES OF ALL LIGHT FIXTURES SHALL BE AS SELECTED BY ARCHITECT.
8. THE ELECTRICAL CONTRACTOR SHALL NOTIFY AND COOPERATE WITH THE MECHANICAL CONTRACTOR SUCH THAT NO PIPING, DUCTS, OR EQUIPMENT FOREIGN TO THE OPERATION OF THE ELECTRICAL EQUIPMENT SHALL BE PERMITTED TO BE INSTALLED IN, ENTER OR PASS THRU ELECTRICAL ROOMS OR SPACES, OR ABOVE OR BELOW ELECTRICAL EQUIPMENT IN OTHER AREAS.
9. ELECTRICAL BOXES SHALL NOT BE LOCATED IN MASONRY COLUMNS IN BRICK WALLS OR IN GROUTED CELLS ADJACENT TO OPENINGS. COORDINATE LOCATION OF BOXES WITH MASONRY CONTRACTOR.
10. ALL PENETRATIONS OF FIRE RATED FLOORS, WALLS, AND CEILINGS SHALL BE SEALED WITH APPROVED MATERIAL TO MAINTAIN FIRE RATING OF SURFACE PENETRATED.
11. CIRCUITS EXTENDING OVER 70' FOR 120 VOLT AND 165' FOR 277 VOLT 20 AMP CIRCUITS SHALL BE RUN WITH MINIMUM #10 CONDUCTORS.

ELECTRICAL SYMBOL SCHEDULE

1. SEE FIXTURE SCHEDULE FOR TYPE, MOUNTING AND WATTAGE.
2. HEIGHT MEASURED TO CENTER LINE OF THE BOX FROM THE FINISH FLOOR.
3. REFER TO DRAWINGS FOR DIRECTIONAL ARROWS.
4. SUBSCRIPT KEYS SWITCH TO FIXTURES CONTROLLED.
5. NEMA TYPE 'ND' NON-FUSED UNLESS NOTED 'F' (FUSED). USE 'HD' 480 V.
6. HEIGHT TO BE THE LOWER OF EITHER 80" A.F.F. OR 6" BELOW CEILING.
7. PROVIDE H.O.A. AND S.S. PUSHBUTTONS AS REQUIRED.

8. DOUBLE ARROWS DENOTE A DOUBLE FACE UNIT.
 9. COORDINATE WITH MILLWORK SHOP DRAWINGS AND ELEVATIONS FOR HEIGHT.
 10. SUBSCRIPT DENOTES NEMA CONFIGURATION.
 11. HEIGHT MEASURED TO BOTTOM OF THE BOX FROM FINISH FLOOR.
- * TYPICAL SYMBOL SCHEDULE. SOME SYMBOLS MAY NOT BE USED IN THIS SET OF DRAWINGS.

STANDARD MOUNTING HEIGHT UNLESS OTHERWISE NOTED ON PLANS

SYMBOL	DESCRIPTION	MOUNTING HEIGHT	NOTES
	ONE CIRCUIT, TWO WIRE HOME RUN TO PANEL		
	2 CIRCUIT, 3 WIRE, COMMON NEUTRAL HOME RUN		
	3 CIRCUIT, 4 WIRE, COMMON NEUTRAL HOME RUN		
	CONDUIT RUN CONCEALED IN WALL OR CEILING		
	CONDUIT RUN CONCEALED IN FLOOR OR GROUND		
	CONDUIT UP		
	CONDUIT DOWN		
	CONDUIT STUB LOCATION		
	CABLE TRAY	AS NOTED	
	CEILING LIGHT FIXTURE	CEILING	1.
	WALL LIGHT FIXTURE	AS NOTED	1.
	RECESSED DOWNLIGHT FIXTURE	CEILING	1.
	FLUORESCENT LIGHT FIXTURE	AS NOTED	1
	FLUORESCENT EGRESS LIGHT FIXTURE	AS NOTED	UNSWITCHED
	AREA LIGHT POLE AND FIXTURE	CONCRETE BASE	SEE DIAGRAM
	FLOOD OR TRACK FIXTURE	AS NOTED	
	CEILING MOUNTED EXIT LIGHT	CEILING	1.3.8.
	WALL MOUNTED EXIT LIGHT	AS NOTED	1.3.8.
	SINGLE POLE SWITCH	+4'-0"	2.
	SINGLE POLE SWITCH	+4'-0"	4. 2.
	THREE-WAY SWITCH	+4'-0"	2.
	FOUR-WAY SWITCH	+4'-0"	2.
	KEY OPERATED SWITCH	+4'-0"	2.
	SWITCH WITH PILOT LIGHT	+4'-0"	2.
	VARIABLE INTENSITY SWITCH	+4'-0"	2.
	TIMER SWITCH	+4'-0"	2.
	MOMENTARY CONTACT SWITCH, CENTER POSITION OFF	+4'-0"	2.
	OCCUPANCY SENSOR	CEILING	
	OCCUPANCY SENSOR	+4'-0"	2.
	POWER PACK	CEILING	SEE DIAGRAM, SPEC.
	AUTOMATIC RELAY PACK	CEILING	SEE DIAGRAM, SPEC.
	LOW VOLTAGE TRANSFORMER		
	DUPLEX RECEPTACLE UPPER OUTLET SWITCH CONTROLLED	+16" OR AS NOTED	9. 11.
	SIMPLEX RECEPTACLE	+16" OR AS NOTED	9. 11.
	DUPLEX RECEPTACLE	+16" OR AS NOTED	9. 11.
	DUPLEX RECEPTACLE		9.
	ELECTRIC WATER COOLER RECEPTACLE		SEE DIAGRAM
	WEATHERPROOF RECEPTACLE	+24" OR AS NOTED	2. 9.
	ISOLATED GROUND RECEPTACLE	+16" OR AS NOTED	9. 11.
	GROUND FAULT INTERRUPTER DUPLEX RECEPTACLE	+16" OR AS NOTED	9. 11.
	DUPLEX RECEPTACLE EMERGENCY POWER (RED)	+16" OR AS NOTED	9. 11.
	FOURPLEX RECEPTACLE	+16" OR AS NOTED	9. 11.
	FOURPLEX RECEPTACLE EMERGENCY POWER (RED)	+16" OR AS NOTED	9. 11.
	FLOOR OUTLET WITH 20A DEVICE	FLOOR	
	MULTIPLE SERVICE FLOOR BOX	FLOOR	
	SPECIAL PURPOSE OUTLET	+16" OR AS NOTED	10. WITH CAP. 11.
	CORD DROP		SEE DIAGRAM
	PLUGMOLD	+46" OR AS NOTED	
	TELEVISION OUTLET	+16" OR AS NOTED	11.
	DATA OUTLET	+16" OR AS NOTED	9. 11.
	TELEPHONE OUTLET	+16" OR AS NOTED	9. 11.
	TELEPHONE/DATA OUTLET	+16" OR AS NOTED	9. 11.
	TELEPHONE OUTLET	FLOOR	
	CALL SWITCH	+4'-0"	2.
	CLOCK OUTLET	+7'-6"	8.
	CLOCK/SPEAKER COMBINATION	+7'-6"	

STANDARD MOUNTING HEIGHT UNLESS OTHERWISE NOTED ON PLANS

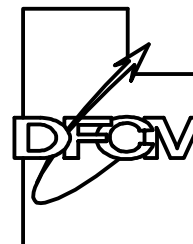
SYMBOL	DESCRIPTION	MOUNTING HEIGHT	NOTES
	JUNCTION BOX (1' IN FLOOR)	AS NOTED	
	MOTOR OUTLET	TO SUIT EQUIP.	
	PHOTO-ELECTRIC CONTROL	AS NOTED	TORK 2000A
	TIME CLOCK	+5'-0"	2.
	PUSHBUTTON	+4'-0"	2.
	NON-FUSED DISCONNECT SWITCH	+5'-0"	5.
	FUSED DISCONNECT SWITCH	+5'-0"	5.
	MANUAL STARTER THERMAL OVERLOAD SWITCH WITH PILOT LIGHT	+4'-0"	2.
	MAGNETIC STARTER	+5'-0"	7.
	MAGNETIC STARTER / DISCONNECT COMBINATION	+5'-0"	
	VARIABLE FREQUENCY DRIVE	+6'-6"	
	PANEL BOARD	TOP AT +6'-0"	
	MAIN DISTRIBUTION PANEL		
	TELEPHONE TERMINAL BOARD		
	BELL	+7'-6"	
	CHIME	+7'-6"	
	FIRE ALARM MANUAL STATION	+4'-0"	2.
	FIRE ALARM SIGNAL HORN/STROBE PROJECTORS	+6'-8"	6.
	FIRE ALARM SIGNAL HORN/STROBE	+6'-8"	6.
	FIRE ALARM SIGNAL SPEAKER/STROBE	+6'-8"	6.
	SMOKE DETECTOR	CEILING	
	DUCT SMOKE DETECTOR		MTD. IN DUCT
	HEAT DETECTOR	CEILING	
	FIRE/SMOKE DAMPER		
	DOOR HOLDER	AS NOTED	
	FLOW SWITCH		
	TAMPER SWITCH		
	WATER FLOOD INDICATOR		
	O.S. & Y. VALVE		SEE DIAGRAM
	FIRE ALARM RELAY		
	FIRE ALARM CONTROL MODULE		
	FIRE ALARM MONITOR MODULE		
	FIRE ALARM STROBE	+6'-8"	6.
	DURESS PUSHBUTTON	+4'-0"	
	SECURITY SYSTEM DOOR SWITCH	DOOR JAMB	
	SECURITY SYSTEM OVERHEAD DOOR SWITCH	CEILING	MOUNT AS PER. MAN
	MAGNETIC SHEAR LOCK		
	SECURITY SYSTEM KEYED ACCESS SWITCH	+4'-0"	2.
	INFRARED SENSOR	AS NOTED	
	SECURITY MOTION DETECTOR		MOUNT AS PER. MAN
	GLASS BREAK DETECTOR	CEILING	
	ELECTRIC DOOR STRIKE		
	ACCESS CONTROL CARD READER	+4'-0"	2.
	CLOSED CIRCUIT TELEVISION CAMERA	AS NOTED	
	DOOR POSITION INDICATING SWITCH		
	SOUND SYSTEM SPEAKER	+8'-0" OR AS NOTED	
	INTERCOM SPEAKER	AS NOTED	
	VOLUME CONTROL	+4'-0"	2.
	MICROPHONE OUTLET	+16"	11.
	MICROPHONE FLOOR OUTLET	FLOOR	
	MICROPHONE CEILING OUTLET	CEILING	
	SOUND EQUIPMENT CABINET		CIRCUIT TO 120V
	ARCHITECTURAL ROOM NUMBER		
	LIGHT FIXTURE (LETTER DESIGNATES TYPE)		
	EQUIPMENT NUMBER		

INDEX OF ELECTRICAL DRAWINGS

EG101 SYMBOLS, SCHEDULES AND NOTES

EP100 POWER PLAN BASEMENT
EP101 POWER PLAN FIRST FLOOR
EP201 POWER PLAN SECOND FLOOR
EP301 ELECTRICAL ROOF PLAN

EX101 ONE-LINE DIAGRAM AND PANELBOARD SCHEDULES
EX301 ELECTRICAL DIAGRAMS



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PROJECT NAME & ADDRESS

**OGDEN ARMORY
HVAC REPLACEMENT**

DFCM No. 07181470

Ogden, Utah

MARK	DATE	REVISION

PROJECT MANAGER:

PC

DRAWN BY:

STAFF

CHECKED BY:

WP

DATE:

JULY 21, 2008

WHW JOB NO.:

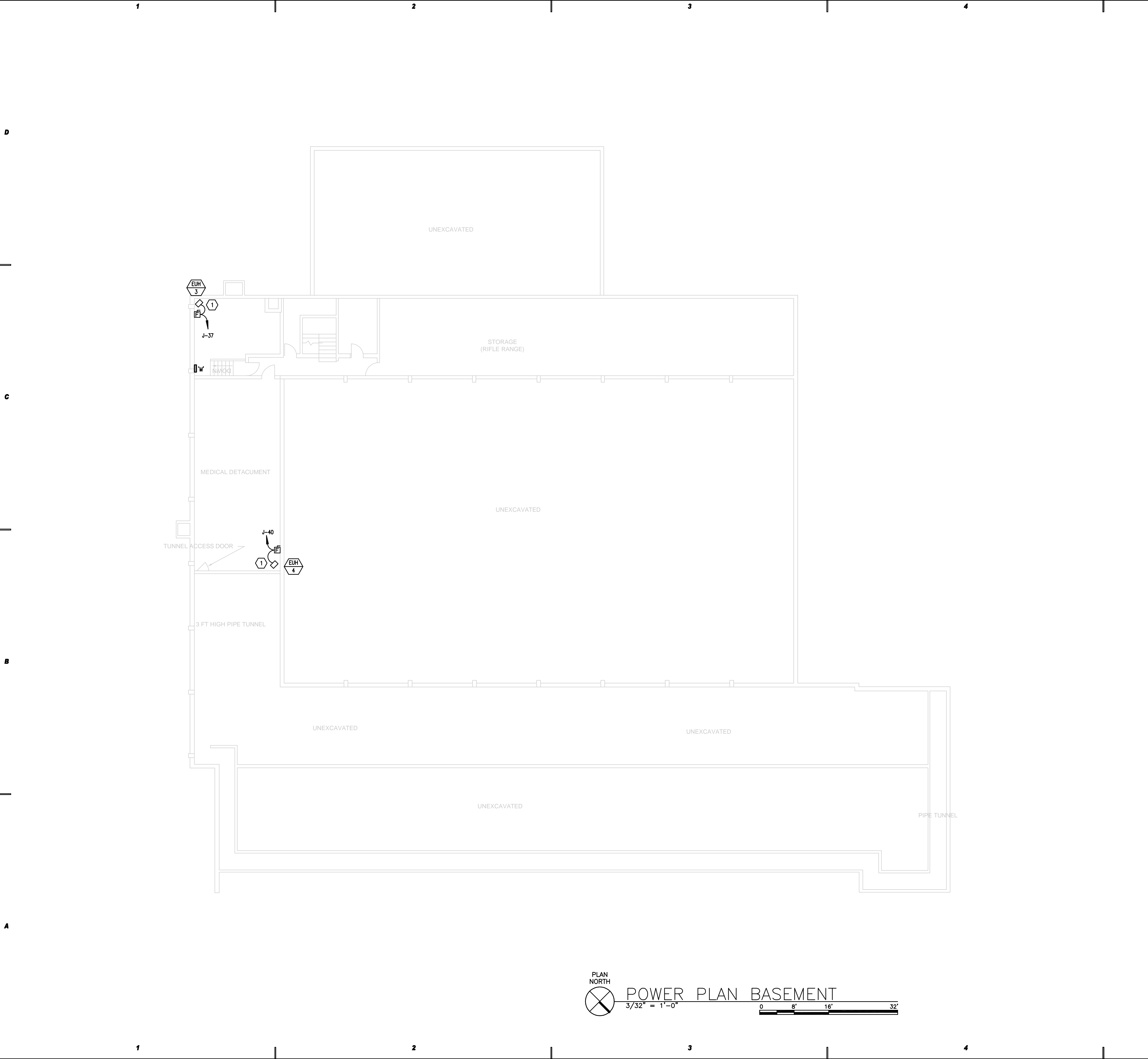
07054

SHEET TITLE

**SYMBOLS, SCHEDULES
AND NOTES**

SHEET NO.

EG101

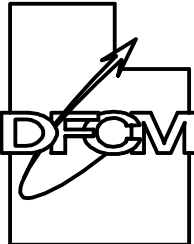


SHEET NOTES

① COORDINATE EXACT LOCATION WITH EXISTING CONDITIONS.

State of Utah

Department of Administrative Services



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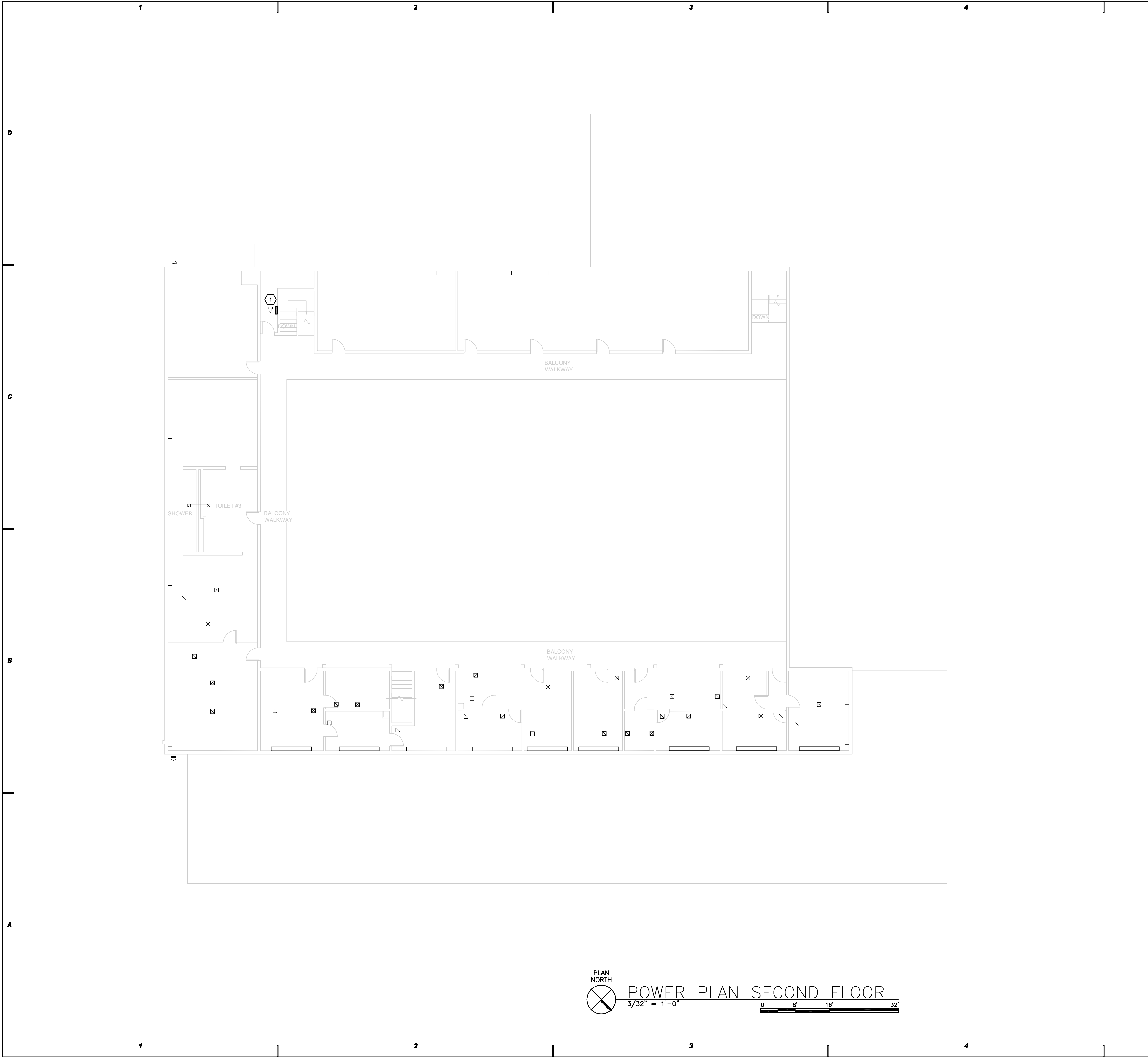
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POWER PLAN
BASEMENT

SHEET NO.

EP100

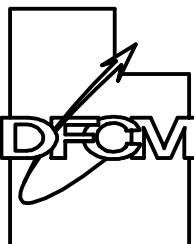
**EP101**



SHEET NOTES

① FIELD VERIFY LOCATION OF NEW ELECTRICAL PANEL 'J'. COORDINATE LOCATION WITH OWNER PRIOR TO ROUGH-IN.

State of Utah
Department of Administrative Services



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JULY 21, 2008

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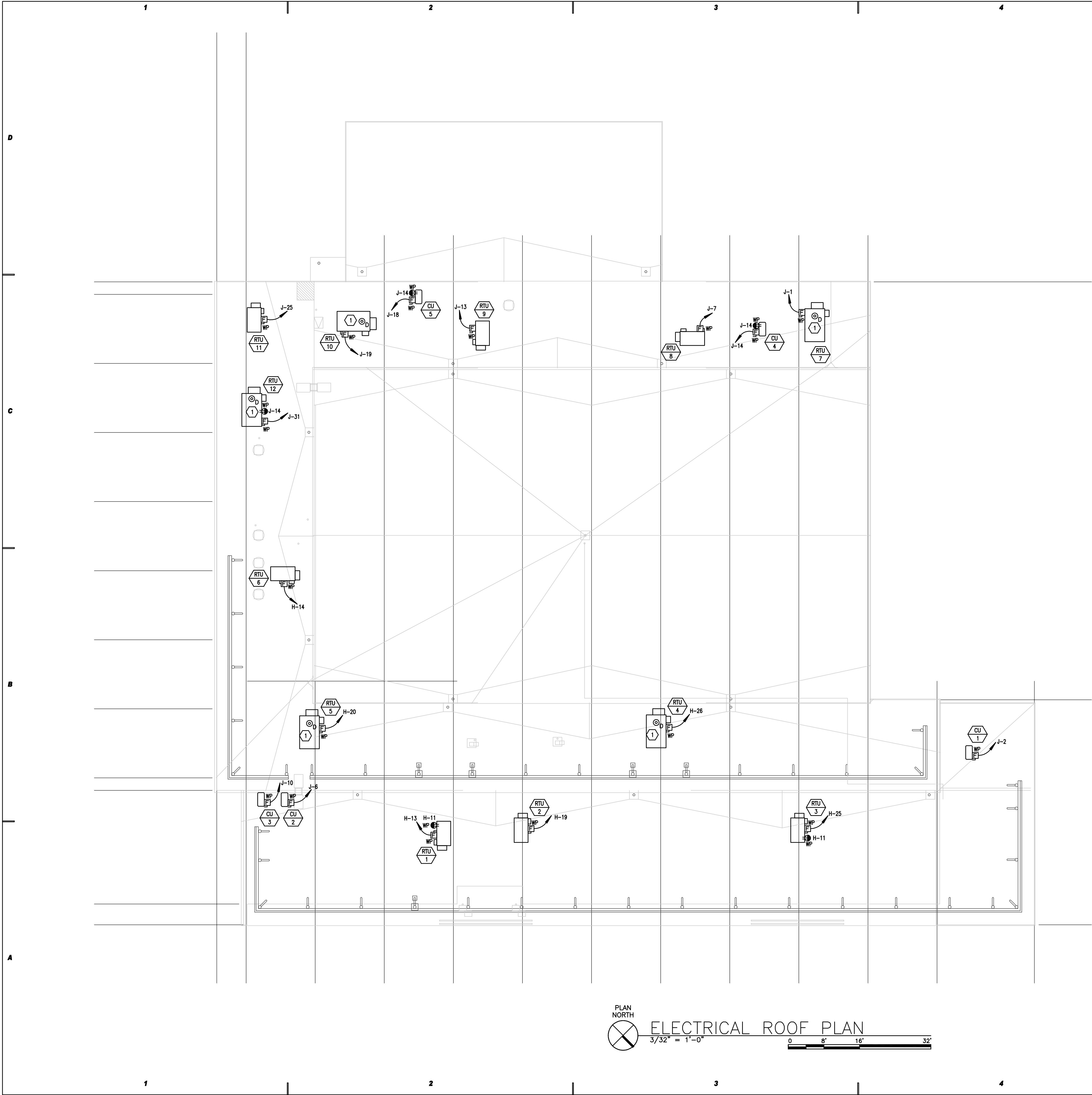
07054

SHEET TITLE

POWER PLAN
SECOND FLOOR

SHEET NO.

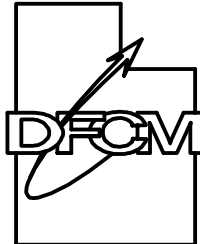
EP201



SHEET NOTES

1 PROVIDE AND INSTALL DUCT MOUNTED SMOKE DETECTOR WITH AUXILIARY CONTACTS TO SHUT DOWN FAN UPON DETECTION OF SMOKE.

State of Utah
Department of Administrative Services



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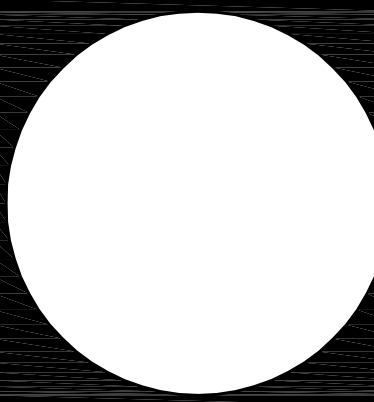
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HVAC REPLACEMENT

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PROJECT MANAGER:
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STAFF
CHECKED BY:
WP
DATE:
JULY 21, 2008
WHW JOB NO.:
07054
SHEET TITLE



ELECTRICAL ROOF
PLAN

SHEET NO.

EP301

PANELBOARD SCHEDULE																
PANEL	H (EXISTING)			TYPE	NG00			120/208	VOLTS	3	PH	4	W			
MOUNTING	FLUSH			DIMENSIONS	20 W			LOCATION	STORAGE			X LUGS			BREAKER	
	X SURFACE				6 D (in.)			AMP	200			MAINS			SUBFEED LUGS	
					H										ISO GROUND	
															200% NEUTRAL	
BRANCH BREAKERS																
ITEM	AMPS	POLE	WIRE	CR. NO.	LEFT PHASE LOAD			RIGHT PHASE LOAD			CR. NO.	AMPS	POLE	WIRE	ITEM	
FLAGPOLE LIGHT ROOF*	20	1	12	1	260						2	20	1		SPARE	
SPARE	20	1	3								4	20	1		SPARE	
SPARE	20	1	5								6	20	1		SPARE	
SPARE	20	1	7								8	20	1		SPARE	
SPARE	20	1	9								10	20	1		SPARE	
LOW ROOF AC UNITS *	20	1	12	11			540			540	12	20	1	12	LOW ROOF AC UNITS *	
RTU-1	35	3	10	13	2716				2716		14	35	3	10	RTU-6	
-	-	-	-	15			2716			2716	16	-	-	-	-	
-	-	-	-	17				2716			18	-	-	-	-	
RTU-2	35	3	10	19	2716			3502			20	45	3	8	RTU-5	
-	-	-	-	21			2716			3502	22	-	-	-	-	
-	-	-	-	23				2716			24	-	-	-	-	
RTU-3	35	3	10	25	2716				3080		26	40	3	8	RTU-4	
-	-	-	-	27			2716			3080	28	-	-	-	-	
-	-	-	-	29				2716			30	-	-	-	-	
SPACE ONLY				31							32				SPACE ONLY	
SPACE ONLY				33							34				SPACE ONLY	
SPACE ONLY				35							36				SPACE ONLY	
SPACE ONLY				37							38				SPACE ONLY	
SPACE ONLY				39							40				SPACE ONLY	
SPACE ONLY				41							42				SPACE ONLY	
* EXISTING CIRCUIT					8408	8148	8688	9298	9298	9838	CONNECTED LOAD TOTAL					
					17766	17448	18828	TOTAL			53678 VA					
					148	146	154	AMPS/PHASE			EQUIP RATING					
											10,000					
JOB NAME: OGDEN ARMORY											AMPS RMS SYS.					

PANELBOARD SCHEDULE																				
PANEL	M			TYPE	NG00			120/208	VOLTS	3	PH	4	W							
MOUNTING	FLUSH			DIMENSIONS	W			LOCATION	BASEMENT			X LUGS			BREAKER					
	X SURFACE				D (in.)			AMP	1200			MAINS			SUBFEED LUGS					
					H										ISO GROUND					
															200% NEUTRAL					
BRANCH BREAKERS																				
ITEM	AMPS	POLE	WIRE SIZE	CR. NO.	LEFT PHASE LOAD			RIGHT PHASE LOAD			CR. NO.	AMPS	POLE	WIRE SIZE	ITEM					
SPARE	100	3	1		A	B	C			5730	A	B	C	2	70	3	PANEL E *			
-	-	-	-	-										4580	-	-	-			
-	-	-	-	-										4580	-	-	-			
PANEL D *	90	3	3	9810						6510				4	70	3	PANEL C *			
-	-	-	-	-			9430						5440	-	-	-	-			
-	-	-	-	-				7380					4520	-	-	-	-			
SPARE	100	3	5											6	100	3	SPARE			
-	-	-	-	-										-	-	-	-			
-	-	-	-	-										-	-	-	-			
PANEL X *	125	3	7	10480						18100				8	175	3	PANEL B *			
-	-	-	-	-			11000						13510	-	-	-	-			
-	-	-	-	-				11720					14670	-	-	-	-			
PANEL Y *	200	3	9	22960						16700				10	200	3	PANEL G *			
-	-	-	-	-			21892						17500	-	-	-	-			
-	-	-	-	-			21804						12200	-	-	-	-			
PANEL BR *	200	3	11	10330										12	225	3	SPARE			
-	-	-	-	-			11890							-	-	-	-			
-	-	-	-	-			9910							-	-	-	-			
SPARE	225	3	13											14	225	3	SPARE			
-	-	-	-	-										-	-	-	-			
-	-	-	-	-										-	-	-	-			
* EXISTING CIRCUIT					53580	53912	51014	45840	41030	35970	CONNECTED LOAD TOTAL									
					89600	84042	86884	TOTAL			279828 VA									
					822	784	725	AMPS/PHASE			EQUIP RATING									
JOB NAME: OGDEN ARMORY															22,000			AMPS RMS SYM.		

PANELBOARD SCHEDULE																	
PANEL	J			TYPE	NG00			120/208	VOLTS	3	PH	4	W				
MOUNTING				DIMENSIONS				LOCATION				X LUGS BREAKER					
	FLUSH			20 W							MAINS			SUBFEED LUGS			
	X SURFACE			6 D (in.)			AMP	600						ISO GROUND			
				H										200% NEUTRAL			
BRANCH BREAKERS																	
ITEM	AMPS	POLE	WIRE SIZE	CR. NO.	A	B	C	A	B	C	CR. NO.	AMPS	POLE	WIRE	ITEM		
RTU-7	150	3	10	1	10843			1414			2	25	2	12	CU-1		
-	-	-	-	3			10843			1414	4	-	-	-	-		
-	-	-	-	5			10843			1414	6	25	2	12	CU-2		
RTU-8	40	3	8	7	3080			1414			8	-	-	-	-		
-	-	-	-	9			3080			998	10	20	2	12	CU-3		
-	-	-	-	11			3080			998	12	-	-	-	-		
RTU-9	30	3	10	13	2101		2101		1414		14	25	2	12	CU-4		
-	-	-	-	15			2101		1414		16	-	-	-	-		
-	-	-	-	17			2101		1414		18	25	2	12	CU-5		
RTU-10	150	3	10	18	10843			1414			20	-	-	-	-		
-	-	-	-	21			10843			1580	22	20	2	12	ELH-1		
-	-	-	-	23			10843			1580	24	-	-	-	-		
RTU-11	40	3	8	25	3080			866			26	20	2	12	ELH-2		
-	-	-	-	27			3080			866	28	-	-	-	-		
-	-	-	-	29			3080				792	30	20	1	12	UH-1, 2	
RTU-12	45	3	8	31	3502						32	20	1		SPARE		
-	-	-	-	33			3502			456	34	15	1	12	FC-1,2,3,4,5		
-	-	-	-	35			3502				36	20	1	12	ROOF OUTLETS		
ELH-3	35	2	8	37	2500						38	20	1		SPARE		
-	-	-	-	39			2500			7500	40	100	2	2	ELH-4		
SPACE ONLY				41							7500	42	-	-	-		
					35948	35948	33449	6522	14208	14218							
					42471	50157	47867	TOTAL									
					354	418	397	AMPS/PHASE									
CONNECTED LOAD TOTAL																	
140296.07 VA																	
EQUIP RATING																	
10,000																	
AMPS RMS SYS.																	
JOB NAME: OGDEN ARMOYR																	

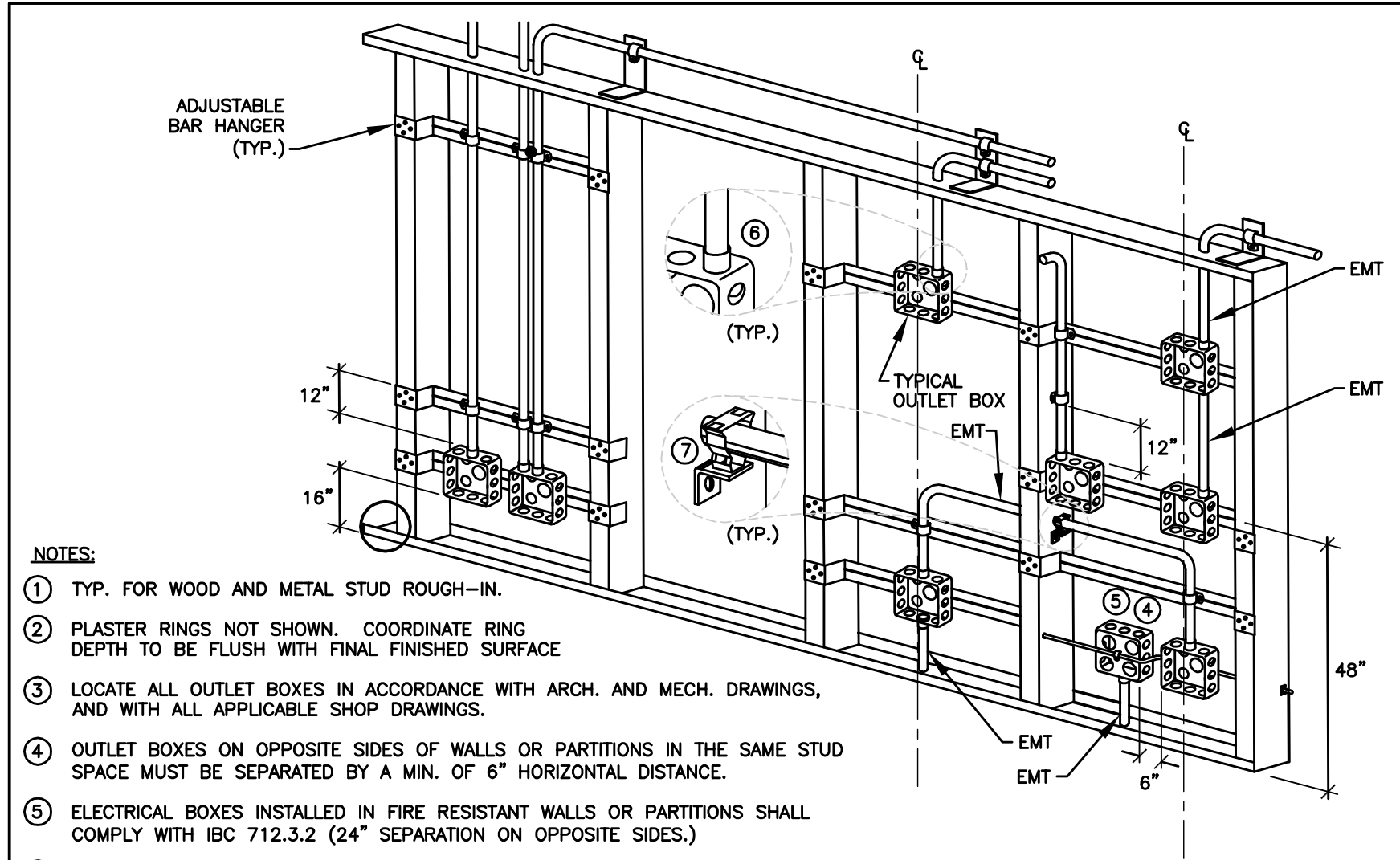


DIAGRAM H004 TYPICAL ROUGH IN REQUIREMENTS
NTS

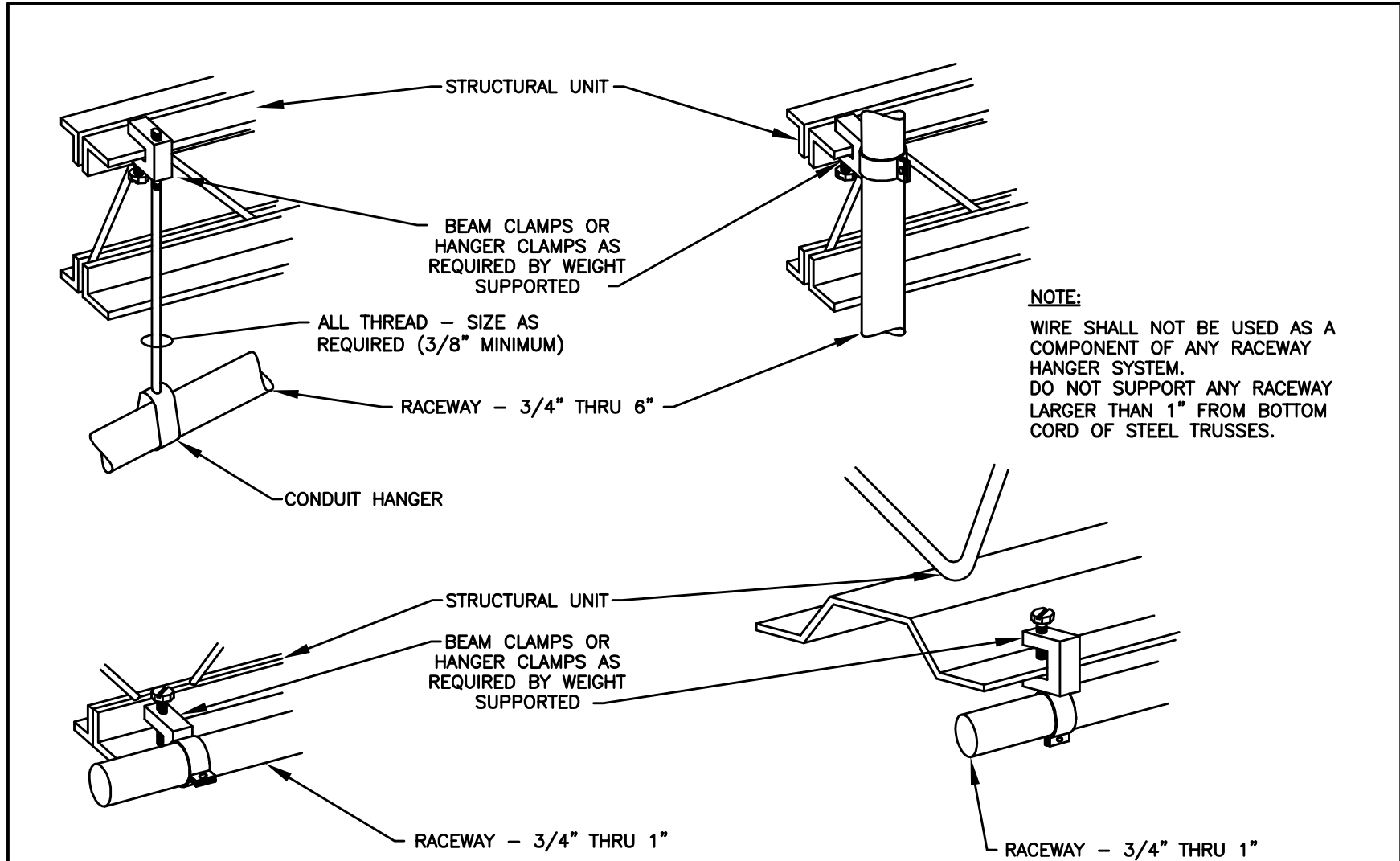


DIAGRAM H003 TYPICAL RACEWAY SUPPORT METHODS
NTS

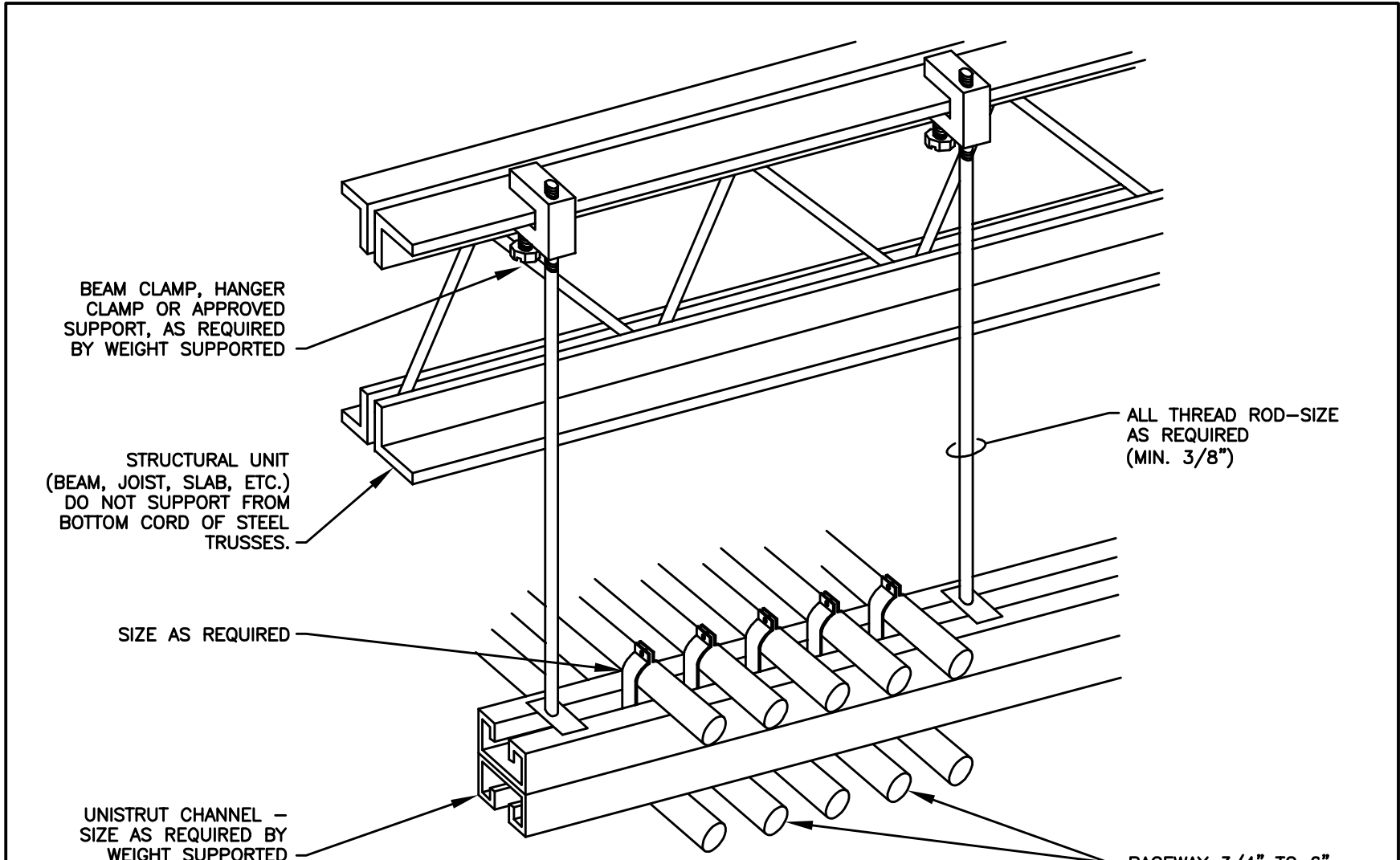


DIAGRAM H001 TYPICAL TRAPEZE CONDUIT RACK
NTS

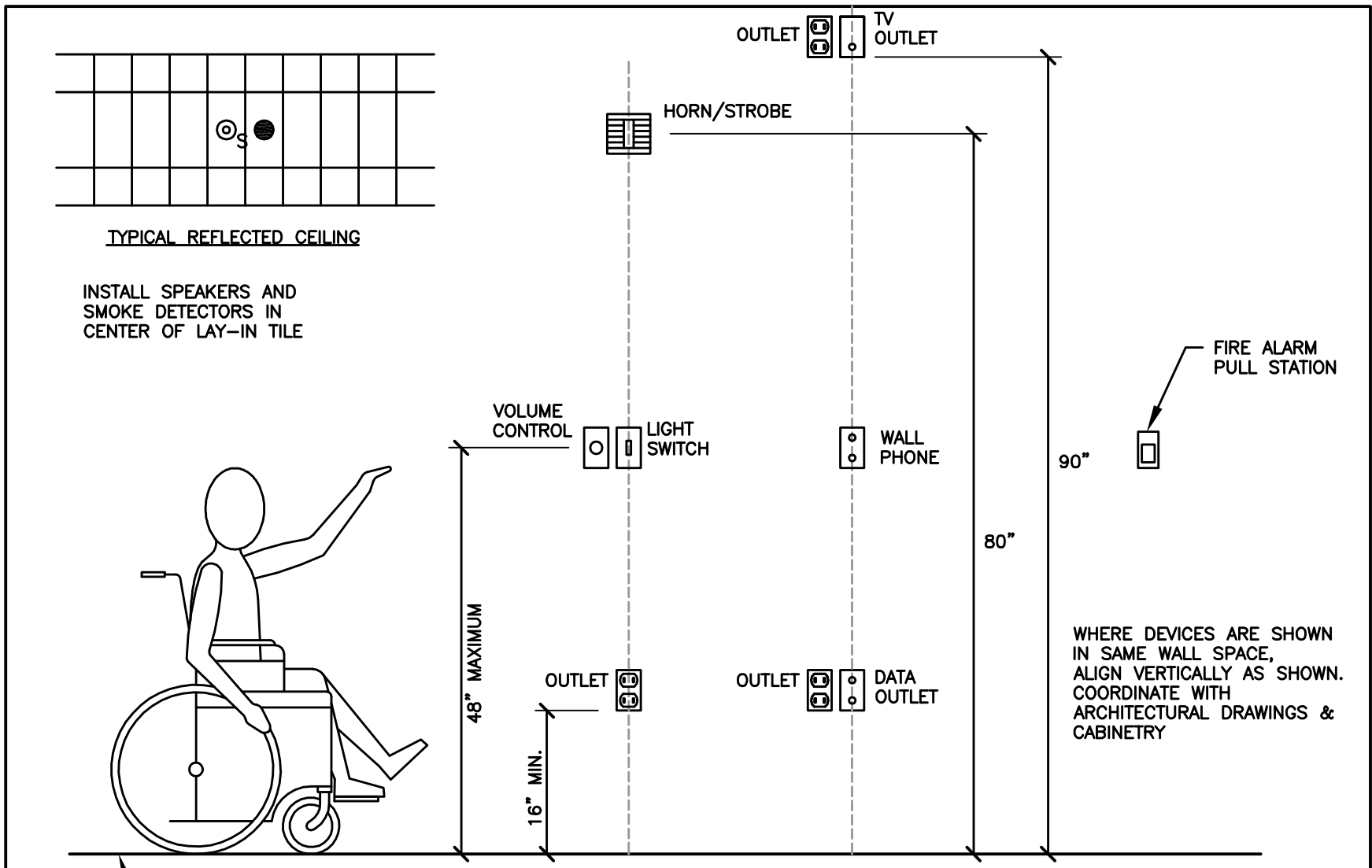


DIAGRAM R001 DEVICE MOUNTING HEIGHTS
NTS

CONSULTANTS



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PROJECT NAME & ADDRESS

**OGDEN ARMORY
HVAC REPLACEMENT**

DFCM No. 07181470

Ogden, Utah

MARK	DATE	REVISION

PROJECT MANAGER:

PC

DRAWN BY:

STAFF

CHECKED BY:

WP

DATE:

JULY 21, 2008

WHW JOB NO.:

07054

SHEET TITLE

ELECTRICAL DIAGRAMS

SHEET NO.

EX301